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# Aquinas's Ontology of the Material World

*Change, Hylomorphism, & Material Objects*

JEFFREY E. BROWER

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*For Janice, Ellie, and Lucy:*

*The three women whose love and affection I cherish the most*

# Preface

Thomas Aquinas (1225–1274) has long been recognized as one of the most important and original thinkers of the Middle Ages.<sup>1</sup> His contributions to virtually every area of medieval philosophy and theology, and in particular his success at bringing the philosophy of Aristotle into harmony with Christian theology, made him enormously influential during his own lifetime and helped to shape the development of much medieval thought after him. Although Aquinas continues to be regarded as important and influential today, his views on a number of central philosophical topics have yet to receive the attention they deserve from contemporary philosophers.<sup>2</sup> This book addresses several such topics, all related to his ontology of the material world—namely, his views about change, hylomorphism, and material objects.

When I speak of Aquinas's *ontology* of the material world, both here and elsewhere, I mean to be referring to his views about the ultimate contents and structure of material reality—that is to say, the beings that it includes, the fundamental types to which they belong, and their relations to one another. Although this way of speaking embodies one perfectly standard use of 'ontology', it might be wondered why I don't speak instead of Aquinas's *metaphysics* of the material world, especially since philosophers sometimes distinguish ontology, as the study of being as such, from metaphysics, understood as the study of broader issues, including many of those discussed in the book. The short answer is that the latter way of speaking conflicts with Aquinas's own preferred division of the theoretical sciences. Like most pre-modern philosophers, Aquinas takes metaphysics (*metaphysica*) to be the science that studies being as such, and physics (*physica*) or natural philosophy (*philosophia naturalis*) to be the science that studies such issues as the nature of change and material objects. In order to avoid confusion, I have chosen to use 'ontology' (rather than 'metaphysics') as a neutral term to cover issues that span these separate disciplines.<sup>3</sup>

Over the past few decades, contemporary philosophers have devoted a great deal of attention to questions concerning the ontology of the material world and the nature

<sup>1</sup> For the best introduction to Aquinas's life, writings, and influence, see Torrell 1993. See also Weisheipl 1983, which remains important.

<sup>2</sup> Aquinas's influence in contemporary philosophy can perhaps be seen most clearly in the areas of ethics and moral psychology (e.g., MacIntyre 1981 and Finnis 1998), philosophy of mind and language (e.g., Braine 1993, Stump 2003, O'Callaghan 2004), and philosophical theology (e.g., Kretzmann 1997 and 1999). But his metaphysics of material objects has begun to receive some attention (see esp. Brown 2005).

<sup>3</sup> I will have more to say about Aquinas's division of the sciences, as well as some of the methodological complications that arise from our differing conceptions of metaphysics, in §5.2. For some historical reflections on the nature of metaphysics, including its relationship to both physics and ontology, see Loux 2006, ch. 1 and van Inwagen 2012.

of material objects in particular. This is not, perhaps, surprising, given the rise of materialism, the view that material objects are the only type of object (or at least the only type of contingent object) that exists.<sup>4</sup> Although Aquinas does not devote any independent treatises to these topics, and does not share the contemporary materialistic outlook, the topics themselves are of special concern to him. Indeed, in the course of working out a comprehensive view of the world, and the special place that human beings occupy within it, he develops what philosophers today would recognize as a well-developed ontology of the material world.

The aim of this book is threefold: (a) to offer a precise reconstruction of the essential elements of Aquinas's ontology of the material world; (b) to locate these same elements within the context of Aquinas's thought more generally (and in particular, within the context of his views on natural philosophy, metaphysics, and theology); and finally (c) to highlight the historical and philosophical significance of Aquinas's views, especially from the perspective of contemporary metaphysical debates. Various aspects of Aquinas's ontology of the material world, including his account of material objects, have been given extensive treatment in recent scholarship, in some cases with the explicit aim of bringing his views to bear on contemporary debates. Even so, this book is distinguished from previous work in two important ways.

First, it is distinguished by the approach it takes to Aquinas's views. The connection between Aquinas's hylomorphism and his views about material objects is particularly close and often noted. For like Aristotle, Aquinas holds that material objects are comprised of both matter (*hyle*) and form (*morphe*), and hence automatically qualify as "hylomorphic" compounds. Nonetheless, commentators have not appreciated the precise nature of this connection or the full implications of Aquinas's views on either topic. The reason for this, I think, is that commentators have not approached Aquinas's views on these topics from the perspective of his theory of change, and hence have overlooked a number of key metaphysical commitments that clearly emerge only in this context. Some of the relevant commitments are both surprising and initially counterintuitive. From what Aquinas says about matter, form, and compound in the context of change, for example, it becomes clear that he is committed not only to the existence of many objects familiar from common sense and ordinary experience—lumps of bronze, statues, and living beings such as Socrates—but also to a host of what are sometimes referred to as "kooky objects" in the literature on Aristotle—objects such as seated-Socrates, which comes into existence when Socrates is seated and passes out of existence when he ceases to be seated.<sup>5</sup> It is also clear from this same context that objects of both types can stand in complicated relationships to one another. Indeed, Aquinas commits himself here to

<sup>4</sup> See Stoljar 2009 on the question of how best to formulate materialism.

<sup>5</sup> See Matthews 1982 and 1992 for the term 'kooky object'. Aquinas himself refers to such objects as 'accidental compounds' or 'accidental unities' or sometimes simply as 'accidents'.

the view that two (or more) distinct hylomorphic compounds can be numerically one and the same material object. That is to say, he commits himself to a type of numerical sameness without identity.<sup>6</sup>

Obviously such commitments have important implications for the proper understanding of Aquinas's views about hylomorphism and material objects. They figure prominently, therefore, in my elaboration and defense of Aquinas's views. Indeed, I hope to show that, despite the theoretical and intuitive costs of some of these commitments, they are well motivated in the context of Aquinas's systematic ontology of the material world.<sup>7</sup>

A second way in which this book is distinguished from previous work has to do with its scope and ambitions. Much of the recent literature on related topics has focused on Aquinas's views about human beings, which represent only one type of hylomorphic compound or material object—and a very special one at that. And even that portion of the recent literature that focuses on Aquinas's views about material objects more generally has tended to emphasize the bearing of his views on only a small number of contemporary debates or issues (in particular, puzzles about material constitution). By contrast, this book focuses on the topics necessary to understand Aquinas's ontology of the material world as a whole, turning only in the final part of the book to the task of determining the special place that human beings occupy within this ontology—a task that turns out to be quite difficult, given how different human beings are from all other material objects. Along the way, moreover, I highlight the contribution that Aquinas's views make to a wide range of contemporary metaphysical debates—including not only material constitution, on which my interpretation of Aquinas differs from that of previous commentators, but also on the nature of change, composition, the ontology of stuff vs. things, the proper analysis of ordinary objects, truthmakers for essential and accidental predication, and the metaphysics of property possession.<sup>8</sup>

Obviously, this book is not intended as an independent treatise in metaphysics. For the same reason, I do not attempt to defend Aquinas's views on all the topics I consider. At the same time, however, I make no effort to conceal my conviction—and wherever appropriate, supply my justification for believing—that Aquinas's account of material objects is superior to the alternatives currently dominant in contemporary Anglo-American philosophy. On the contrary, I seek wherever

<sup>6</sup> For an account of what it could mean to say that two (or more) distinct hylomorphic compounds are numerically one and the same object, see §4.4.

<sup>7</sup> See in particular Ch. 7.

<sup>8</sup> In order substantively to engage Aquinas's views on each of these topics while keeping the book within manageable length, I have had to neglect certain details of his views on related topics that are both interesting and distinctive—including his understanding of mixtures and the elements (earth, air, fire, and water), ordinary bodily parts (such as heads and hands, flesh and bones, organs, and other more arbitrary undetached parts), and his notorious position in late medieval debates about the number of substantial forms that a material substance can possess (namely, one). Given my particular focus in the book, and the complications that these further issues introduce, detailed treatment of them must be left to future work.



possible to bring Aquinas's account into dialogue with the best recent literature on related topics, defending its essential elements and motivating the others.

The book is divided into five main parts.<sup>9</sup> Part I (Chs 1–2) introduces the background necessary for understanding Aquinas's ontology of the material world. Parts II–IV (Chs 3–10) present the ontology itself, focusing on the three topics required to understand it—change, hylomorphism, and material objects. And Part V (Chs 11–13) addresses certain complications that arise for Aquinas's views on each of these topics. I will return to the nature and purpose of Part I shortly. But first, I want to sketch the contents of Parts II–V, which provide the heart of the book.

In Part II (Chs 3–4), I examine the foundation for Aquinas's ontology of the material world—namely, his theory of change. I begin by clarifying his views about generation and corruption (Ch. 3), which provide the basis for his understanding of change in general. I then turn to the clarification of his views about substantial vs. accidental change in particular (Ch. 4). The goal of both chapters is to highlight the key metaphysical commitments of Aquinas's views, and to show how they provide the basic structure for his hylomorphism.

In Part III (Chs 5–7), I turn to Aquinas's hylomorphism proper, which is likewise crucial for understanding his ontology of the material world. I begin this part by showing how, in the context of his writings on metaphysics, Aquinas fleshes out the basic structure of his hylomorphism in ways that go beyond his theory of change (Ch. 5).<sup>10</sup> Next, I offer a reconstruction of Aquinas's hylomorphism that facilitates its comparison with a familiar contemporary analysis of ordinary objects—namely, substratum theory or bare particularism (Ch. 6). Finally, I close this part with a defense of Aquinas's hylomorphism designed to highlight its significance for a number of contemporary metaphysical debates (Ch. 7). Since my defense in this chapter focuses only on those aspects of Aquinas's hylomorphism that are central to his understanding of the material world, it allows me both to anticipate important aspects of his account of material objects to be discussed in Part IV, as well as to identify some of the chief theoretical advantages it enjoys over its main contemporary rivals (especially with respect to puzzles about intrinsic change, material constitution, and the metaphysics of property possession).

In Part IV (Chs 8–10), I spell out the precise connection between Aquinas's hylomorphism and his account of material objects, arguing that the latter is a proper part of the former. I begin by clarifying Aquinas's understanding of hylomorphic composition and identifying the various types of hylomorphic compound that populate his ontology (Chs 8–9). I then offer a precise reconstruction of his account

<sup>9</sup> As an appendix, the book also includes a glossary of technical terms that will be important to keep track of throughout.

<sup>10</sup> As indicated in n. 3, Aquinas's division of the theoretical sciences is different (and much sharper) than our own, with the result that discussions dealing with what we would now think of as the metaphysics or ontology of change properly belong for him to physics or natural philosophy. For further discussion, see §5.2.

of material objects in terms of one specific type of hylomorphic compound (namely, compounds possessing prime matter) and highlight the implications of this account for the possibility of co-located material objects (Ch. 10).

In the fifth and final part of the book (Chs 11–13), I identify certain pressures, both philosophical and theological, that ultimately force Aquinas to refine, extend, and in certain cases radically modify the basic ontology of the material world that emerges from Parts II–IV. Although I touch in this final part on issues associated with Aquinas’s views about change, hylomorphism, and material objects generally, much of what I have to say focuses on the special case of human beings—beings that Aquinas locates within the class of material objects despite his thinking of them as possessing an immaterial soul as a proper part or constituent. My goal in this final part is not to defend, or even fully to explain, all the complications that arise for Aquinas’s views, but merely to give a fuller sense of the ontology to which they lead, along with some of the intriguing dialectical possibilities that they open up.

The project that I have undertaken in this book involves a number of difficulties, including the execution of two very different tasks: (a) close textual analysis of the sort required to justify the attribution of substantive metaphysical views to a historical figure, and (b) sufficient engagement with the relevant contemporary literature and debates to demonstrate the systematic depth and explanatory power of these same views. Obviously, those in the best position to evaluate my success with respect to the first task are historians of philosophy (in particular, medievalists), whereas those in the best position to evaluate my success with respect to the second task are contemporary metaphysicians. Equally obviously, the members of these two groups typically have very different backgrounds in terms of both training and interests. Thus, the historians cannot be expected to have at their fingertips all the nuances of the relevant contemporary literature and debates, and the contemporary metaphysicians cannot be expected to have the patience necessary to wade through the relevant textual analysis and scholarship—at least not without some assurance that their efforts will be sufficiently repaid.

To address these difficulties, as well as to provide some context for the chapters that follow, I have included a substantial introduction in Part I (Chs 1–2). I begin this part with a brief sketch of Aquinas’s complete ontology—that is, the comprehensive view of the world in terms of which he approaches all questions about material objects (Ch. 1). I then fill out this sketch in a way that highlights some of the main issues, options, and debates necessary for understanding this same ontology (Ch. 2).

The discussion in Part I serves an important exegetical purpose. Given the systematic nature of Aquinas’s thought, it is often difficult to separate the proper interpretation of his views about particular aspects of the material world from their place in his understanding of the world as a whole. By indicating up front what I take to be his complete ontology, I hope to make clear the sorts of systematic considerations that guide my particular interpretive decisions.

The discussion in Part I also serves several further purposes, directly related to the difficulties mentioned previously. First, it enables me to introduce, with maximum clarity and economy, an approach to material objects that is not only sophisticated, but also unfamiliar to many historians and most contemporary philosophers. Second, it enables me to clarify at the outset, and independently of any interpretive questions, much of what I take to be historically and philosophically significant about this same approach. Third and finally, it enables me to introduce my own preferred framework and terminology for discussing Aquinas's views. This framework and terminology is intended to help bridge the gap between the members of my different target audiences—those familiar with Aquinas's mode of speech but not with contemporary debates and vice versa. But it is also intended to help both parties appreciate the value of substantive engagement with the work of the other. Philosophical debates about material objects, as about so many topics, are perennial; the same issues arise again and again, and progress in understanding the views of philosophers in one period can often be made by consulting those of philosophers in another. Indeed, as my statement of the relevant framework and terminology aims to make clear, not only does substantive engagement with Aquinas's thought have much to contribute to contemporary metaphysical debates, but substantive engagement with contemporary metaphysical debates also has a genuine contribution to make to the proper understanding of Aquinas.

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The great majority of this book (roughly 90 percent) appears here for the first time. I am, however, grateful for permission to reproduce some previously published material. Chapters 3 and 4 contain some material previously published in *The Oxford Handbook of Aquinas* (Oxford: Oxford University Press, 2012), edited by Brian Davies and Eleonore Stump. And a section of Chapter 7 contains material previously published in *Mind* 119 (2010).

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# List of Abbreviations

<i>DEE</i>	<i>De ente et essentia</i>
<i>DME</i>	<i>De mixtione elementorum</i>
<i>DPN</i>	<i>De principiis naturae</i>
<i>In BDT</i>	<i>Super Boetium De Trinitate</i>
<i>In CA</i>	<i>Super librum De Causis expositio</i>
<i>In I Cor.</i>	<i>Super primam Epistolam ad Corinthios lectura</i>
<i>In DA</i>	<i>Sententia libri De anima</i>
<i>In Meta.</i>	<i>In duodecim libros Metaphysicorum Aristotelis expositio</i>
<i>In Phys.</i>	<i>Commentaria in octo libros Physicorum Aristotelis</i>
<i>In Sent.</i>	<i>Scriptum super libros Sententiarum</i>
<i>QDA</i>	<i>Quaestiones disputatae de anima</i>
<i>QDP</i>	<i>Quaestiones disputatae de potentia</i>
<i>QDSC</i>	<i>Quaestio disputata de spiritualibus creaturis</i>
<i>QDV</i>	<i>Quaestiones disputatae de veritate</i>
<i>Quod.</i>	<i>Quaestiones de quolibet</i>
<i>SCG</i>	<i>Summa contra gentiles</i>
<i>ST</i>	<i>Summa theologiae</i>

References to these works follow the standard divisions of Aquinas's texts and, in some cases, also include paragraph or line numbers of the relevant editions. (So, for example, *DPN* 4.42–43 = *De principiis naturae*, chapter 4, lines 42–43 of the Leonine edition.) For details about editions of these works, see the bibliography. Translations of Aquinas throughout are mine, although I have consulted standard translations in preparing them. I employ italics for emphasis or to mark technical terms, and do not necessarily respect the punctuation (or, where Latin terms are supplied, the orthography) of any text I use.

In addition to abbreviations for Aquinas's works, I also make use of several other symbols or abbreviations:

a.	<i>articulus</i>
c.	<i>circa</i>
Ch.	chapter in the present volume
ch.	chapter in another secondary source

n(n).	footnote(s) in a secondary source (esp. this volume)
q(q).	<i>quaestio(nes)</i>
§(§)	section(s) in a secondary source (esp. this volume)
[x]	(in a translation or quotation): I have added <i>x</i> to the text

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# PART I

## Introduction

# 1

## A Sketch of the Complete Ontology

In Part I of this book (Chs 1–2), I offer a systematic introduction to Aquinas’s complete ontology—that is, the comprehensive framework within which he develops his more specific views about the material world. In this chapter, I sketch the main contours of the ontology as a whole, focusing in particular on its basic contents and structure, as well as the main ontological types in terms of which both are to be understood. In the next chapter, I fill out this sketch by comparing Aquinas’s views with those of some of his contemporaries and ours.<sup>1</sup>

Most of the issues raised in these two chapters are treated at greater length in the rest of the book. For the same reason, my procedure in both is dogmatic—that is to say, I proceed by simply asserting what I take to be the proper interpretation of Aquinas’s views, sidestepping wherever possible the sort of detailed textual analysis needed to justify my interpretation. What is more, since my discussion in these chapters is merely intended to provide an orientation to my project as a whole, I ignore a number of complications that will become important later on—in particular, complications having to do with Aquinas’s distinctive views about numerical sameness (Chs 4, 6–7, 10) and the special place that human beings occupy in the material world in virtue of possessing an immaterial soul (Chs 11–13).

### 1.1 Basic Contents and Structure of the World

According to Aquinas, the world or “all that there is” can be exhaustively described in terms of two general ontological types—namely, *God* and *creature*. As Aquinas sees it, God is a simple, incorporeal being—where the mark of incorporeality is the lack of spatial extension.<sup>2</sup> By contrast, creatures are a mix of corporeal and incorporeal beings—where these can be either simple, as in the case of angels, or complex,

<sup>1</sup> For another recent sketch of Aquinas’s complete ontology, much briefer and in some ways different from mine, see Stump 2003, ch. 1 (esp. 35–44). Stump uses the term ‘things’ to cover all the elements of Aquinas’s ontology. For reasons that will become clearer in §2.2–3, I think this term is potentially misleading, insofar as Aquinas’s ontology includes two types of being that are often contrasted with *things*—namely, *stuff* and *facts*.

<sup>2</sup> Aquinas is happy to speak of God as located at each of the places to which his activity extends—indeed, as omnipresent in this sense. But he insists that, as an incorporeal being, God lacks “extension in the three dimensions” and hence does not “fill” or is not “circumscribed by” any place. See §8.3 for texts and discussion.

as in the case of ordinary material substances or bodies. What is more, Aquinas thinks that all creatures display a radical form of dependency on God. That is to say, despite their distinctness from God, they are essentially dependent on him not only for their initial existence or origin, but also for their continued existence.

The dependency of creatures on God is not the only type of dependency that Aquinas countenances, or even the only type of necessary connection that he thinks can hold between distinct existences. On the contrary, he distinguishes a host of dependency relations, varying considerably in modal strength and often holding solely between distinct creatures. Before we can understand Aquinas's views about such relations, however, we must first be clearer about some of the more specific ontological types in terms of which he describes the world. In order to make progress here, it will be useful to say a few words about Aquinas's understanding of ontological types themselves.

To begin, let us say that an ontological type is any type of being, where we can understand the latter notion in very broad terms:

#### Type of Being

*F* is a type of being if and only if some *F*s (one or more) can or do exist.

On this understanding, *being* turns out to be the most general possible ontological type, with all other ontological types serving as specifications or subtypes of it.<sup>3</sup>

Obviously not all types of being in this broad sense will be useful for purposes of doing ontology. For not all such types are equally useful when it comes to specifying the ultimate structure of the world, or "carving reality at its joints" in Plato's famous phrase. Following a standard convention, let us say that one type of being is more *fundamental* than another just in case it does a better job of carving reality at its joints. Eventually, we shall be concerned with what Aquinas takes to be the most fundamental ontological types (§2.4). For now, however, we can think of an ontological type as any type of being that is more or less fundamental.

Ontological commitment, as Aquinas sees it, is primarily determined by one's fundamental types. Of course, any time we come to believe in beings of some new type, whether fundamental or not, we are thereby committed to adding new elements to our ontology. But such a commitment, Aquinas thinks, does not require us to

<sup>3</sup> When I speak of types of being here and in what follows, I mean to be restricting myself only to types of being that exist in extramental reality. In this respect, my use of 'being' is somewhat narrower than Aquinas's own. For Aquinas often speaks of being (*ens*) in such a way as to allow for a distinction between a type that exists in extramental reality (*ens in rerum natura*) and a type that exists only in the mind (*ens rationis*). See, e.g., *DEE* 1 and *In Meta.* 4.1. Aquinas's views about the members of the latter type, the so-called beings of reason, are beyond the scope of my investigation in this book (but see n. 40, this chapter). I will, however, have more to say about his preferred division of ontological types, as well as their connection to his views about analogy, in §2.4.



introduce any new elements “in addition” to those already falling under our fundamental types. And this is because Aquinas accepts the controversial assumption that non-fundamental (or “derivative”) beings are reducible to (or “nothing over and above”) the fundamental beings.<sup>4</sup>

Although Aquinas regards irreducibility as an important criterion of fundamentality, it is best thought of as providing a necessary rather than a sufficient condition for it. This is because Aquinas allows that there can be irreducible ontological types having more fundamental subtypes falling under them. Indeed, *being* itself is one such type. For although it cannot be reduced to any other ontological types, neither can it be regarded as a fundamental, since its subtypes include *substance* and *accident*, and each of these is more fundamental than *being* itself. This explains, I think, why Aquinas insists that *being* is not a genus with species and differentiae, but rather a general type whose members are related analogically.<sup>5</sup>

So much for ontological types in general. Let us now look at some of the specific ontological types that Aquinas appeals to in his description of the world's contents and structure. And here it will be useful to begin with two at the heart of his hylomorphism—namely, *matter* and *form*.<sup>6</sup>

Aquinas invokes the notions of matter and form in a number of different contexts, and puts them to a number of different uses. But in their primary or basic sense, they are always correlative, not only with each other but also with a further notion—that of a hylomorphic compound. In order to clarify the primary sense of these notions, as well as to bring out their correlativity, Aquinas associates them with two others—namely, potentiality and actuality. More specifically, he identifies matter with that which is in potentiality to receiving a form—namely, *a being in potentiality* (*ens in potentia*). He identifies form with that which actualizes the potentiality of matter—namely, *an actuality* (*actus*). And, finally, he identifies a hylomorphic compound with that which exists when some form actualizes the potentiality of some matter—namely, *a being in actuality* (*ens actu*).<sup>7</sup>

<sup>4</sup> This assumption helps, I think, to make sense of Aquinas's willingness to talk about a host of different types of being (such as privations, negations, relations, various types of parts and potential beings) which he clearly takes to have a diminished ontological status. For an introduction to some of the issues surrounding fundamentality, see Barnes 2012.

<sup>5</sup> Aquinas's views about analogy are highly complex and controversial. For an introduction to some of the relevant complexities and controversies, see Ashworth 1991 and 1992. For a detailed development of the sort of connections between analogy and fundamentality presupposed in the main text, see McDaniel 2010b. See also §2.4 for further discussion of Aquinas's views about both analogy and the relation of *substance* and *accident* to *being*.

<sup>6</sup> It might seem odd to refer to *matter* as an ontological type, since it is not obvious that it makes sense to say some matters (one or more) exist. Like other medieval philosophers, however, Aquinas thinks that being and unity are co-extensive (or “transcendentals”), and hence that we can always speak of one or more beings of any type. See §§5.4–5 for the precise sense in which Aquinas thinks that some matter can be described as numerically one. For Aquinas's views about the transcendentals, and their place in medieval philosophy more generally, see Aertsen 1996.

<sup>7</sup> See Ch. 3 (esp. §3.3) for texts and discussion. Aquinas sometimes speaks of God, and other immaterial substances, as *forms*—or even as *substantial forms*. (More on substantial forms in §1.2.) It is important to

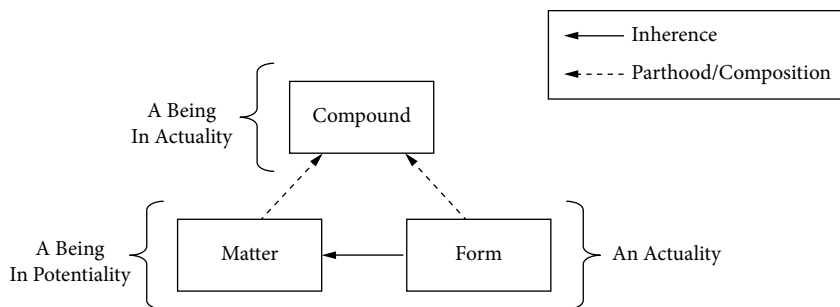


Figure 1.1 Matter, Form, and Compound

For the sake of clarity, we can represent this understanding of matter, form, and compound schematically, as indicated in the diagram at Fig. 1.1. As this diagram helps to emphasize, Aquinas conceives of matter, form, and compound as three distinct types of being, bearing two distinct types of relation to one another. The solid arrow represents the relation that Aquinas calls *inference*. This is a one–one relation that forms or actualities bear to the matter whose potentiality they serve to actualize. The dotted arrows represent the relation that Aquinas calls *composition* (or *parthood*).<sup>8</sup> This is a many–one relation that matter and form jointly bear to a compound when the potentiality of the former has been actualized by the latter. For in such a case, Aquinas says, matter and form are related to a compound as “parts to a whole, or what is simple to what is complex” (*DPN* 4.42–43).<sup>9</sup>

Two further points. First, I have represented the relation between matter and form, in the diagram, in terms of inference. Although that is how Aquinas typically speaks

emphasize, however, that this way of speaking involves an extended or analogical use of ‘form’, one in which it is not correlative either to ‘matter’ or to ‘compound’.

<sup>8</sup> More precisely, the dotted arrows *taken jointly* represent the relation of composition, whereas these same arrows *taken individually* represent the relation of parthood.

<sup>9</sup> See §4.3 for detailed discussion of Aquinas’s reasons for insisting that hylomorphic compounds possess matter and form as parts, and hence themselves display a type of mereological structure. His insistence in this regard might seem odd, since compounds are obviously not composed of matter and form in the same way that things are composed of their ordinary material parts (e.g., hands or heads). Indeed, it might seem more natural to speak of matter and form as *constituents* (rather than *parts*) and hence of their relation to compounds in terms of *constituency* (rather than *composition* or *parthood*).

As I see it, however, the issue here is mainly terminological. Nowadays when philosophers speak of *mereological structure*, they typically mean to be referring to a structure that obeys the axioms of standard contemporary mereology (namely, unrestricted composition, uniqueness, and transitivity), whereas when they speak of non-mereological structure (or constituency) they mean to be referring to one that violates at least some of these same axioms (e.g., unrestricted composition). Aquinas, by contrast, uses ‘composition’ (*compositio*) and related terms broadly enough to cover both types of structure. For a general introduction to medieval mereology that places Aquinas’s usage in its proper context, see Arlig 2011. For a defense of the appropriateness of this broader usage of ‘composition’ and related terms, see McDaniel 2009b. I will have more to say about Aquinas’s understanding of composition in general, and hylomorphic structure in particular, in §8.1.

of the relationship between matter and form, it is important to recognize that he sometimes also speaks of it in terms of *subjection* (*subjectum*)—where this is the converse (or correlative) of inherence, and is best understood as the relation of *being a substratum* for some form.

The second point is this. In the diagram I have restricted the term ‘a being in actuality’ to compounds. This restriction corresponds to Aquinas’s strict and proper sense of the term, which he always uses to contrast compounds with both matter and form. It is important to recognize, however, that Aquinas sometimes uses the term ‘a being in actuality’ in a broader sense to contrast both forms and compounds with matter. When he uses the term in this broader sense, he often qualifies the sense in which both forms and compounds are beings in actuality, saying that forms are beings in actuality *in another* (since they are actualities that inhere in matter), whereas compounds are beings in actuality *in or through themselves* (since they possess forms or actualities as proper parts or constituents).<sup>10</sup>

As will become clear shortly, Aquinas is often at pains to distinguish different types of matter, form, and compound (indeed, two different types of each). But it is important to appreciate at the outset what is common to the members of each of these types, at least in terms of their metaphysical role or function.<sup>11</sup> Functionally speaking, matter is always to be understood as that which serves as the substratum for some form or property; form is always to be understood as that which is possessed by matter in the way that a property is possessed by a substratum (namely, via inherence); and a compound is always to be understood as that which exists when some matter serves as the substratum for some form.

<sup>10</sup> Aquinas’s tendency to distinguish a multiplicity of senses for a single term (narrow vs. broad, proper vs. improper, qualified vs. unqualified, etc.) significantly complicates the discussion of his views. This tendency is, however, characteristic of medieval philosophy as a whole. Part of the explanation owes to philosophical and theological influences, and part of it owes to historical accident. Most medieval philosophers are influenced by Aristotle, who displays this same tendency *in excelsis*. (See, e.g., Studtmann 2008, who estimates that Aristotle uses the term ‘form’ in his *Metaphysics* in over 30 different senses.) Again, the general desire to uphold certain traditional theological formulas or doctrines, regardless of other philosophical commitments, often forces medievals to distinguish various senses in which such formulas or doctrines are to be understood. Finally, due to circumstances surrounding the collapse of the Roman Empire, very few texts of ancient philosophy are available in the Latin West prior to the 1100s. As a result, medieval philosophers are committed, perhaps more than philosophers from any other historical period, to preserving and synthesizing their philosophical heritage—a commitment that also encourages the tendency to distinguish different senses in which the same term can be used.

As an aid to the discussion in what follows, I have added (as an appendix) a catalog of all the terms for which it will be important to keep in mind the different senses that Aquinas distinguishes. See (1) and (2) of the entry on ‘being in actuality’ for what I have here identified as the strict and broader sense of the term.

<sup>11</sup> When Aquinas wants to discuss beings or entities of some type, he often begins by characterizing their type in broadly functional terms—that is to say, in terms of some metaphysical role or function its members can play. In contemporary philosophy, it is standard to do this only when the type in question is “multiply realizable”—that is to say, only when beings with different intrinsic natures can play the relevant role, and hence “realize” the same type. By contrast, Aquinas takes this approach even in cases where the type in question is not multiply realizable, and hence the relevant role can be played only by beings with a specific intrinsic nature. For two examples of this, see the discussion of prime matter in §4.2 and §5.3, as well as that of the human soul in §11.4 and §12.3. For more on Aquinas’s functionalism, see §3.3, §3.5, and §4.2.

As this broadly functional characterization helps to make clear, Aquinas's three hylomorphic types—*matter*, *form*, and *compound*—bear a striking resemblance to three ontological types familiar from contemporary philosophy—*substratum*, *property*, and *complexes of each*. Admittedly, contemporary philosophers tend to characterize substrata in a more substantive or metaphysically robust way than Aquinas does—that is to say, not merely as beings that can possess forms or properties, but as a *sui generis* type of particular.<sup>12</sup> What's more, contemporary philosophers typically refer to complexes of substrata and properties as *facts* or *concrete states of affairs* (rather than *hylomorphic compounds*), and speak of such complexes as possessing *constituents* (rather than *parts*) related by *instantiation* (rather than *inherence*).<sup>13</sup> Even so, if we focus only on the structural relations between the two sets of types, the resemblance is exact. Indeed, for reasons that will emerge in the context of Aquinas's views about change (see esp. §4.3), hylomorphic compounds are themselves best conceived of as facts or concrete states of affairs.<sup>14</sup>

One final point in this connection. I have been speaking as if the relations of inherence and composition were distinct elements of Aquinas's ontology, to be listed in a final inventory alongside such beings as matter, form, and compound. This is, in fact, misleading. Like most medieval philosophers, Aquinas is committed to denying the existence of polyadic properties and hence to explaining all relations in terms of monadic forms or properties and their substrata.<sup>15</sup> In the case of the relations of inherence and composition in particular, they are best understood, for Aquinas, as primitive types of dependency. Thus, inherence is best understood as a type of dependency built into the nature of forms or properties, whereas composition is best understood as a type of dependency built into the nature of complexes or facts.

<sup>12</sup> Such particulars are ordinarily referred to as *bare particulars*, though Armstrong (1997, 123–6 and 1989, 60) prefers to call them *thin particulars* on the grounds that they cannot exist independently of properties or relations, and hence are never truly *bare*, but must rather be constituent parts of *thick particulars* or complexes that include both them and their properties. For more on bare, thin, and thick particulars, see §2.3 and §§6.1–2.

<sup>13</sup> For more on the place of facts or concrete states of affairs in contemporary substratum theory, see §2.3. For some discussion of the difference between concrete and abstract states of affairs, and their relation to Aquinas's understanding of hylomorphic compounds, see Chs 3–4 (esp. §3.1, §3.5, and §4.3).

<sup>14</sup> Because hylomorphic compounds are best conceived of as facts, and fact-composition is importantly different from other, more familiar types of part-whole relation, it will often be helpful to follow the contemporary convention and refer to matter and form as *constituents* (rather than mere *parts*). See §8.1 for further discussion. See also n. 9, this chapter.

Although hylomorphic compounds are *in a certain respect* dependent on, and hence posterior to, their constituent matter and form, it is important to emphasize that it does not follow either (a) that only their matter and form are fundamental (since fundamental things can stand in dependency relations) or (b) that hylomorphic compounds are *in every respect* posterior to their constituent matter and form (since things can be related by different types of priority and posteriority). See again Barnes 2012 for relevant discussion. These points are important for understanding Aquinas's views about material substances, which he identifies with hylomorphic compounds despite regarding them as one of the primary or most fundamental types of being.

<sup>15</sup> See Brower 2010 for further discussion. See also Hansen 2012 for evidence that not all medieval philosophers denied the existence of polyadic properties.

I will have more to say in the next section about the precise nature and modal strength of these types of dependency, as well as about the various other sorts of dependency associated with Aquinas's hylomorphism. Suffice it to say for now, however, that forms and compounds are, *in some sense*, incapable of existing apart from the substrata on which they depend.

So far I have been speaking of Aquinas's hylomorphism in general terms. As it turns out, however, Aquinas develops his hylomorphism primarily in the context of his physics or natural philosophy. For the same reason, it has a special application to the realm of corporeal or extended beings—though, as we shall see shortly, it also has some application to the realm of incorporeal or unextended beings.

## 1.2 The Corporeal vs. Incorporeal Realm

Aquinas thinks that the corporeal world is completely analyzable in terms of two different types of hylomorphic compound—what he calls *material substances* and *accidental unities*, respectively. These two types of compound are distinguished both by their matter and by their form—that is to say, both by the type of being that serves as their substratum and by the type that inheres in their matter. As the diagram at Fig. 1.2 helps to make clear, Aquinas thinks of all material substances as composed of *prime matter* and *substantial form*, whereas he thinks of all accidental unities as composed of *substances* and *accidental forms*.<sup>16</sup>

Material substances are the building blocks of the corporeal world. Indeed, Aquinas identifies them with corporeal substances or bodies, and takes them to include many of the objects familiar from common sense and experience—not only paradigmatic living things (e.g., plants, animals, and human beings), but also non-living substances (e.g., lumps of bronze).<sup>17</sup>

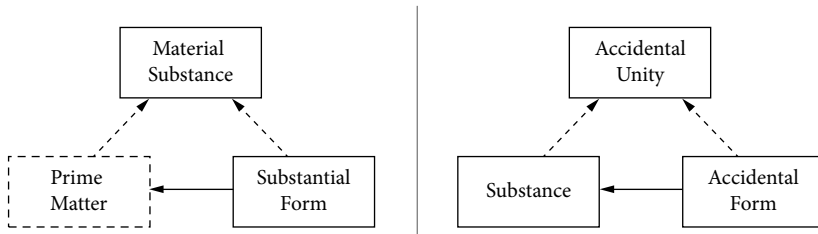


Figure 1.2 Types of Hylomorphic Compound

<sup>16</sup> Questions can be raised about whether heavenly bodies are composed of prime matter. I take up these questions in §9.1.

<sup>17</sup> As we shall see in Chs 2–3, a lump of bronze—in particular, that from which a statue is made—is one of Aquinas's paradigmatic examples of a non-living substance. Some commentators have doubted, however, whether such a thing could really qualify as a substance for Aquinas. See, e.g., Pasnau 2002, 84–6.

As already noted, Aquinas refers to the matter of material substances as *prime matter* and to the forms of such substances as *substantial forms*. The reason for this is perhaps obvious in the case of *substantial forms*. The type of compound (or being in actuality) that results from the inherence of such forms in matter is a substance, and as a result the forms themselves can be said to enter into their very nature or essence.

As for the matter associated with material substances, Aquinas refers to it as *prime matter* in order to emphasize that it alone qualifies as matter in the strict and proper sense. Some matter, such as that associated with our bronze statue, is itself composed of matter and form. But prime matter lacks all hylomorphic composition. Indeed, it is precisely because prime matter is not itself composed of any forms or actualities that Aquinas insists that it must be conceived of as *a being in pure potentiality* (or *pure potentiality*, for short). As a type of matter, it cannot be identified straightforwardly with actuality (as forms are); and as a type of matter not composed of any forms or actualities, it cannot be identified with a being in actuality (as material substances or compounds are). The fact that prime matter must be conceived of as pure potentiality leads Aquinas to think that it is a very distinctive type of being. (To emphasize its distinctiveness, I have used dotted lines to surround the box containing prime matter in the diagram at Fig. 1.2.)

Two further points about prime matter. First, although it is not composed of any forms or actualities, it does not lack form or actuality altogether. On the contrary, insofar as prime matter serves as the substratum for a form or actuality (namely, substantial form), it possesses actuality via inherence. To say that it is a being in pure potentiality, therefore, is merely to say that it lacks actuality *through itself* (*per se*).

Second, although prime matter lacks the type of composition associated with hylomorphic compounds, it does not lack composition altogether. On the contrary, the prime matter associated with any given material substance—call it a *portion* of prime matter—is itself composed of smaller portions of prime matter—call them *subportions*.<sup>18</sup> Thus, Aquinas thinks that if we divide a lump of bronze in half, we will end up with two smaller lumps, each possessing a proper part or subportion of the total prime matter associated with the original lump. What is more, Aquinas thinks that every portion or subportion of prime matter is itself a part of all the prime matter that exists in the world. This, I think, is part of what is behind his notoriously obscure claim that “prime matter is said to be numerically one in all things” (*DPN* 2.92).<sup>19</sup> In any case, the fact that Aquinas thinks that prime matter can enter into part-whole relations, despite lacking any hylomorphic composition, shows that he is committed to at least two fundamentally different types of composition.<sup>20</sup> It is interesting to

<sup>18</sup> This talk of portions and subportions is introduced merely for the sake of convenience and could easily be dispensed with in favor of proper names or descriptions, along the lines of Markosian 2004, 409.

<sup>19</sup> For a very different interpretation of Aquinas on prime matter, and of this passage in particular, see Pasnau 2011, §4.1. See also Ch. 5 (esp. §5.4) for further development and defense of my preferred interpretation.

<sup>20</sup> And hence is a *compositional pluralist* in the sense of McDaniel 2004.

note, moreover, that the type of composition associated with prime matter seems to behave in the same basic way as the relation that goes by the name of 'composition' in classical mereology—that is, the standard formal logic of parts and wholes.<sup>21</sup>

Having examined material substances and the matter and form of which they are composed, let us now turn to accidental unities, the other type of hylomorphic compound illustrated at Fig. 1.2.

As the case of accidental unities makes clear, substances themselves can serve as the matter for forms or properties, and thereby enter into larger compounds. Now, when a substance, such as our lump of bronze, serves as the matter for some form or property (say, some shape), it qualifies as matter only in the purely functional sense of the term. For unlike prime matter, it is not a being in pure potentiality, but rather a compound of such matter and form and hence a being in actuality. (In order to bring out this contrast with prime matter, I have used a solid line to surround the box containing substance in Fig. 1.2.)

Aquinas often refers to substances, or things that qualify as matter in the purely functional sense, as *subjects* or *substrata*. Moreover, since the forms or properties for which they serve as the matter (or substratum) always fall outside their nature or essence, he refers to such forms, as well as the larger compounds of which they are a part, as *accidents*—though more often than not he reserves the term 'accidents' for accidental forms and refers to the compounds of which such forms are a part as *accidental unities*.<sup>22</sup>

As in the case of material substances, Aquinas takes accidental unities to include a number of objects familiar from common sense and experience, including many artifacts. Indeed, one of his favorite examples of an accidental unity is a bronze statue, which he takes to be composed of a material substance and a quality (more specifically, a lump of bronze and a specific shape). It is important to emphasize, however, that Aquinas also takes accidental unities to include a host of objects that are unfamiliar, if not repugnant, to common sense and experience—including such "kooky objects" as white-Socrates, which is an object that comes into existence when Socrates becomes white (say, as a result of being kept indoors all winter) and ceases to exist as soon as he acquires a tan.<sup>23</sup> White-Socrates is another of Aquinas's

<sup>21</sup> See D. Lewis 1991 for a statement of the standard mereology in terms of the three basic axioms mentioned in n. 9 (namely, unrestricted composition, uniqueness, and transitivity). In §5.4, I argue that the type of composition associated with prime matter obeys the first of these axioms. It is natural to think that it also obeys the other two. For a comparison of this type of composition with hylomorphic composition, see §8.1.

<sup>22</sup> For examples of places where Aquinas refers to accidental unities as 'accidents', see *DPN* 1, *ST* 1.9.2, *In Phys.* 1.2.14, and *In Meta.* 5.9.885–7. For a more complete list of references, including other ways in which Aquinas refers to accidental unities, see Brown 2005, 64, n. 27.

<sup>23</sup> It might be thought that Aquinas's accidental unities must be taken to include an infinite number of objects—namely, one for every way in which a substance can be truly characterized. In fact, however, this is not the case. Aquinas accepts a sparse (as opposed to an abundant) conception of forms or properties, and hence introduces a distinct form or property only for some of the ways in which a substance can be characterized. For more on Aquinas's views about the number and types of accidental forms and unities, see §2.4 and §9.3. For more on the sparse vs. abundant conception of properties in particular, see §7.1.

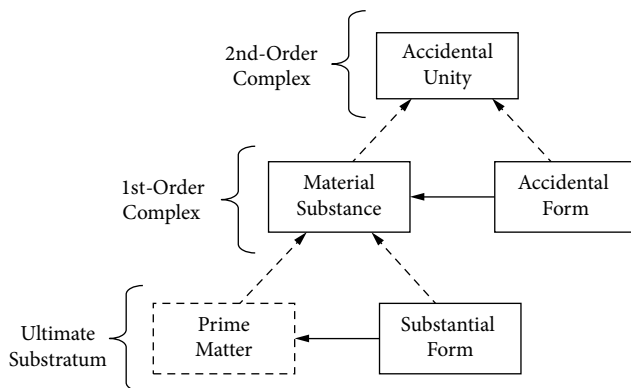


Figure 1.3 Hierarchy of Compounds in the Corporeal World

favorite examples of an accidental unity. And like his example of the bronze statue, it too involves an object composed of a substance and quality.

As the foregoing helps to make clear, Aquinas thinks of the corporeal world not only in terms of the general ontological types *matter*, *form*, and *compound* but also in terms of more specific subtypes of each. In the case of *compound*, moreover, it is important to see that he takes its members to form a kind of nested hierarchy. Indeed, as the diagram at Fig. 1.3 indicates, Aquinas's understanding of the contents and structure of the corporeal world can be fully described in terms of members of this hierarchy.

This diagram highlights all the main types of being included in Aquinas's ontology of the corporeal world. Thus, there are two different types of matter or substratum (prime matter and material substances); two different types of form or property (substantial and accidental forms); and two different types of compound (material substances and accidental unities). In the case of compounds, moreover, we can distinguish different orders of complex (first- and second-order complexes), depending on whether or not they include other compounds as proper parts or constituents.

If Aquinas's ontology were restricted to the corporeal world, then this description of its contents and structure would be exhaustive.<sup>24</sup> But as we have seen, it is not so restricted. On the contrary, Aquinas's ontology extends beyond the corporeal world to include a realm of incorporeal beings, such as God and the angels. If we are to understand his complete ontology, therefore, we must briefly consider the extent to which his hylomorphism is applicable to these sorts of beings as well.

Let us begin with God. Like other medieval philosophers, Aquinas takes God to be an incorporeal substance (or spirit), often referring to him simply as *the divine*

<sup>24</sup> At least apart from the special case of human beings and certain other complications, which I'm ignoring in this chapter. See Chs 11–13.



*substance (divinam substantiam)*. To be sure, God is a very special sort of substance. He is the only substance—for that matter, the only being—who does not depend on anything else for his existence; he alone is such as to exist entirely from himself (or *a se*).<sup>25</sup> According to Aquinas, such radical independence or “aseity” guarantees that God is not composed of any matter or form, since otherwise he would be dependent on them in the way that a complex depends on its proper parts or constituents. But it also guarantees that God does not serve as the matter for any forms or properties, since even that would require a type of dependency. For Aquinas thinks that substances depend on their forms or properties at least for certain of their characterizations (as Socrates depends on his whiteness for being white).<sup>26</sup> Indeed, like other medieval philosophers, Aquinas takes the radical independence or aseity of God to guarantee that he is an absolutely simple, wholly immaterial substance not properly subject to any sort of hylomorphic analysis.<sup>27</sup>

As for the angels, Aquinas thinks that they are like God in one respect, but unlike him in another. They are like God insofar as they lack any composition of prime matter and substantial form. Indeed, it is precisely because they are like God (or simple) in this respect that they qualify as incorporeal substances (or spirits).<sup>28</sup> For just as the mark of incorporeality is the lack of spatial extension, so too, Aquinas thinks, the mark of the corporeal is the possession of prime matter. Although angels lack any composition with respect to their nature or substance, they do nevertheless enter into larger compounds (or accidental unities) by serving as the matter (or substratum) for distinct forms (or accidents). In this respect, Aquinas thinks, angels are more like material substances than they are like God.

What all of this shows is that, when it comes to the realm of incorporeal beings, Aquinas's hylomorphism has only limited application. For although the incorporeal realm includes one of the two types of compound found in the corporeal world—namely, accidental unities—not every incorporeal being is associated with such a compound. For the sake of completeness, as well as to emphasize the relationship between Aquinas's hylomorphism and his complete ontology, we can represent his understanding of the world as a whole in terms of the diagram at Fig. 1.4.

<sup>25</sup> As we shall in §2.4, God's distinctive mode of being prevents him from belonging to any of the Aristotelian categories, and hence from qualifying as a substance in the same sense that created substances do. This explains why Aquinas sometimes denies that God is a substance. See, e.g., SCG 1.25.

<sup>26</sup> For the details of Aquinas's views about the relationship between forms or properties and characterization, see §§4.3–4 and §§6.3–5.

<sup>27</sup> As I noted earlier, Aquinas sometimes speaks of immaterial substances, including God, as *forms* or even *substantial forms*. (See n. 7, this chapter.) This is because he associates form with actuality, and thinks of all substances as having actuality. But as I also noted, and should by now be clear, this way of speaking must be understood to involve an extended or analogical use of the term ‘form’. For in the context of Aquinas's hylomorphism, a form is an inherent being. But, of course, no substance can be said to inhere.

<sup>28</sup> Aquinas sometimes speaks as if angels—and indeed all creatures—are complex objects composed of essence and existence. But for reasons I shall explain shortly, I think this is just a figurative way of describing their contingency or radical dependency on God.

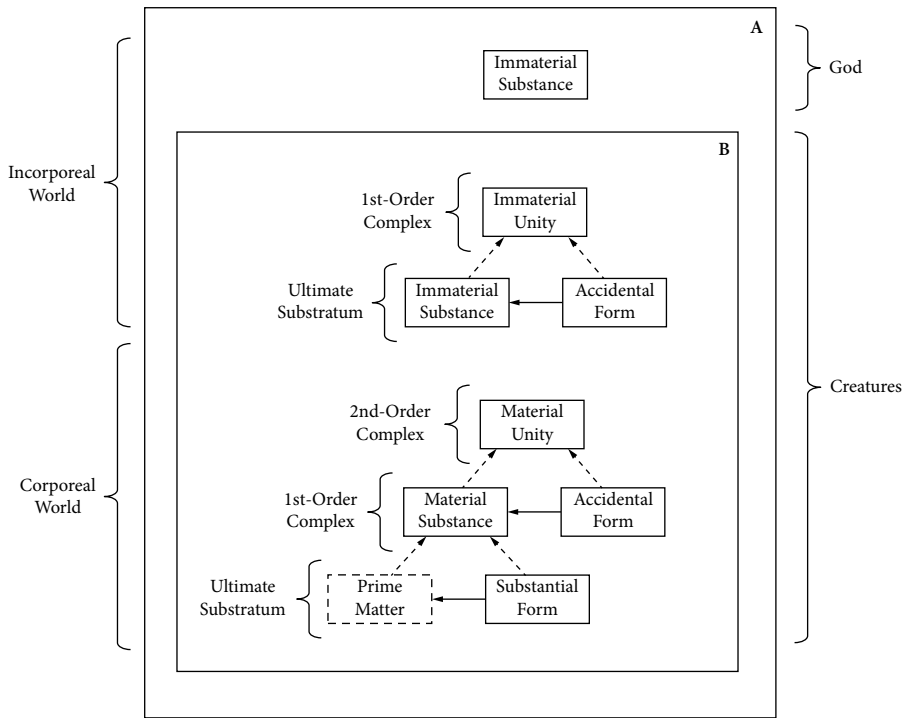


Figure 1.4 The World

As I see it, this diagram provides a complete inventory of all the different types of beings included in Aquinas's ontology, as well as a list of the main types of relation that these beings can bear to one another.<sup>29</sup> At one end of the metaphysical spectrum we have prime matter. It is a type of being that serves both as a substratum for forms (namely, substantial forms) and as a constituent of compounds (namely, material substances). At the other end of the metaphysical spectrum we have God, who neither possesses any matter or form (and hence is not himself a compound), nor serves as the matter for any forms (and hence is not a constituent of any compounds). In order to emphasize the metaphysical distance between God and prime matter, Aquinas will sometimes say that, just as prime matter has a special connection to potentiality, so too God has a special connection to actuality: "God and prime matter

<sup>29</sup> Strictly speaking, this claim requires a bit of qualification. For this diagram does not include a list of all the *specific* types of being that Aquinas recognizes, including nine different types of accident; nor does it take into account his distinctive views about *modes* of being. (I shall take up both issues in §2.4, when I turn to Aquinas's understanding of the ten Aristotelian categories.) Even so, the diagram remains complete, as I see it, in the sense that everything in Aquinas's ontology will fall under one of the *general* types listed here. That is to say, I deny that there are any further types of being for him that are both distinct from and not included under one of these general types. I will have more to say about how the diagram's completeness in this sense can be challenged shortly.

are distinguished in the following way: the former is pure actuality, the latter pure potentiality" (SCG 1.17.140d). As passages such as this one help to underscore, Aquinas is willing to speak of all substances, including God, in terms of actuality, even though not all substances possess any forms or actualities as proper parts or constituents.

Between the metaphysical poles of prime matter and God, there are two different types of form, two different types of substance, and two different types of accidental unity. Thus, there are substantial and accidental forms. These are types of being that both inhere in substrata (namely, prime matter and substances) and serve as constituents of larger compounds (namely, material substances and accidental unities). Again, there are material and immaterial substances. These are types of being that, at the very least, serve as substrata for forms (namely, accidental forms), and in the case of material substances are also composed of substrata and forms (namely, prime matter and substantial forms). Finally, there are two different types of accidental unity, depending on whether the substances that serve as their substrata are material or immaterial. Aquinas himself introduces no distinct names for these two types of compound, but for obvious reasons I refer to them as *material unities* and *immaterial unities*, respectively. Like material substances, these are types of being composed of both substrata and properties. Unlike them, however, they do not themselves serve as the substrata for any properties or enter into any larger compounds.<sup>30</sup>

There are at least two respects in which my description of Aquinas's ontology might appear to be incomplete. First, I have said nothing about the ordinary parts of material substances or bodies—that is, parts such as heads, hands, flesh, bones, tissues, and organs, not to mention such arbitrary undetached parts as the upper and lower halves of bodies, or their right- and left-hand sides. But Aquinas certainly speaks as if bodies possessed such parts, often referring to them as *integral* or *quantitative parts*.<sup>31</sup> Doesn't this just go to show that such parts must be regarded as additional elements of his ontology?<sup>32</sup>

I think the answer to this question is 'no'. If integral parts were additional elements, they would have to be some type of hylomorphic compound. Aquinas is clear, however, that there are two and only two types of hylomorphic compound—

<sup>30</sup> As these further clarifications indicate, the relationship between *types* and *orders* of compound, for Aquinas, is a complicated one. In the corporeal world, first-order complexes are always material substances, whereas second-order complexes are always accidental unities. In the incorporeal world, by contrast, there are no second-order complexes and first-order complexes are always accidental unities. See §6.3 for some discussion of Aquinas's strategy for dealing with apparent counterexamples to the claim that accidental unities never serve as the substrata for any properties or enter into any larger compounds.

<sup>31</sup> In certain contexts, moreover, he describes integral parts such as heads and hands as *incomplete substances*, in order to emphasize their dependency on the wholes of which they are the parts. See, e.g., ST 1.75.3, as well as the discussion in §11.5.

<sup>32</sup> For a helpful overview of the relevant issues and options, see Pasnau 2011, esp. §§26.1–3. For an interpretation of Aquinas that takes integral parts to be additional elements, see Brown 2005. For an interpretation much closer to my own, see Leftow 2001, esp. 126–7.

material substances and accidental unities.<sup>33</sup> And yet it seems equally clear that integral parts cannot be compounds of either type. For if they were material substances, then they would violate Aquinas's commitment to the Aristotelian doctrine that no substance can have another substance as a proper part.<sup>34</sup> But the same would be true if they were accidental unities. For if integral parts were accidental unities, then they would themselves be composed of substances.

As I see it, therefore, integral parts are best explained, for Aquinas, in terms of arrangements of portions or subportions of prime matter—where the precise nature of their arrangement is itself determined by the type of form (or compound) with which the prime matter in question is associated. Thus, if a portion of prime matter is combined with one type of substantial form (say, to compose a human being), its subportions will be arranged in one way (say, head-wise and hand-wise, flesh-wise and bone-wise). But if this same portion of prime matter is combined with another type of substantial form (say, to compose a lump of bronze), its subportions will be arranged in another way (say, lump-wise). I think this is why Aquinas insists that, unlike hylomorphic parts, integral or quantitative parts must be conceived of as logically *posterior* to the wholes of which they are the proper parts.<sup>35</sup> Indeed, I think it is precisely for this reason that Aquinas also speaks of integral or quantitative parts as existing merely *potentially* in the wholes of which they are the parts:

Two things in actuality can never be one in actuality. But two things in potentiality can be one in actuality, as is clear in the case of the parts of a continuous thing. (*In Meta.* 7.13.1588)<sup>36</sup>

As passages such as this one help to make clear, Aquinas's talk of "being in potentiality" must be understood in different ways in different contexts. Thus, when he describes prime matter as a being in potentiality (or pure potentiality), this must be understood as calling our attention to a fundamental type of being. By contrast, when he describes integral or quantitative parts as beings in potentiality,

<sup>33</sup> See Chs 4–5, 8.

<sup>34</sup> More precisely, they would violate his commitment to the doctrine of the unicity of substantial forms, according to which all material substances have only a single substantial form. See §12.5 for some complications regarding substances having substances as proper parts.

<sup>35</sup> The fact that hylomorphic parts are in a certain respect logically *prior* to the wholes of which they are a part is one of the main reasons why Aquinas insists that God cannot possess such parts. See, e.g., *ST* 1.3.2 and 7.

<sup>36</sup> For further passages, see Brown 2005, 87–94 (esp. 89, n. 104). Just as I think that Aquinas's talk of integral parts is best understood in terms of arrangements of portions of prime matter, the same is true in the case of his talk of composition in terms of the elements (earth, air, fire, and water). It is significant that in at least one place, Aquinas describes the elements as existing merely *potentially* in the wholes of which they are a part. See *In Meta.* 7.16.1633. But more often than not, Aquinas speaks of the elements as existing *virtually* in such whole. See in particular *DME*. By this, I take him to mean that relevant portions of prime matter are arranged in such a way as to preserve the characteristic elemental powers or accidents. For a discussion of interpretations similar to my own in this regard, including those which take the elements to be a type of integral part for Aquinas, see Decaen 2000. For a very different interpretation, see Brown 2005, 94–8.

I think this must be understood as indicating that they are wholly derivative beings, and hence not to be included in his fundamental ontology.<sup>37</sup>

A second respect in which my description of Aquinas's ontology might appear to be incomplete has to do with Aquinas's views about essence and existence. According to Aquinas, God is a necessary being or one whose nature or essence guarantees that he exists. Indeed, insofar as he takes God to be an absolutely simple being, he denies that there is any distinction in him between essence and existence. In the case of creatures, by contrast, just the opposite is true; in their case, he insists that a distinction must be drawn between essence and existence precisely because, unlike God, they are not necessary but rather contingent beings. For the same reason, Aquinas suggests, the relationship between the essence and existence in creatures is not unlike that between matter and form (or potentiality and actuality). As he puts the idea at one point: just as a runner can be thought of as a compound of substance and accident (namely, a human being and an individual act of running), so, too, creatures can be thought of as compounds of essence (*essentia*) and existence (*esse*).<sup>38</sup> But doesn't this just go to show that our description of Aquinas's ontology must be expanded to include at least one further type of element—namely, individual acts of being or existence?

Here again I think the answer is 'no'. As I see it, the whole point of Aquinas's distinction between essence and existence in creatures is to emphasize their contingency or lack of aseity. Likewise, I think his talk of creatures being "composed" of essence and existence is a figurative way of expressing this same point, and hence not to be taken literally. Indeed, Aquinas himself seems to put us on guard against taking such talk literally, when he adds (as he sometimes does) that it is merely "as if" (*quasi*) creatures were composed of essence and existence (e.g. *QDP* 3.8; *In Meta.* 12.1.4) and that such composition cannot be ultimately understood in hylomorphic terms (e.g. *SCG* 2.54).<sup>39</sup>

<sup>37</sup> Compare Pasnau's deflationary interpretation of the "potential parts" doctrine: "to describe a part as merely 'potential' is to say that it does not exist" (Pasnau 2011, 616). I agree with this interpretation, provided we take it to apply only to what exists *fundamentally*. But whereas I think of the doctrine of "potential parts" as extending to all integral parts for Aquinas, Pasnau insists that it applies only to some of them. Indeed, he claims to be aware of no scholastic author who would extend the doctrine to all integral parts, and in the specific case of Aquinas cites two passages (namely, *In Phys.* 1.9.65 and *In Meta.* 5.21.1102) that suggest that the functional parts of living things are actual rather than merely potential (Pasnau 2011, 615, n. 8). But I think that such passages must be read in the context of *In Meta.* 7, where Aquinas makes it clear that although such parts are "close to actuality" in virtue of having a certain form or function, they still exist merely potentially:

Even though all parts [of substances] exist in potentiality, one might very readily suppose that the parts of living things (and the parts of the soul which are close to them) exist in actuality as well as in potentiality . . . Even so, although these parts (both of the soul and of living things) are close to actuality, nevertheless they all exist in potentiality when the whole [of which they are the parts] is one and continuous by nature. (*In Meta.* 7.16.1634–1636)

<sup>38</sup> *QDP* 3.8.

<sup>39</sup> For an interpretation of the distinction between essence and existence congenial to my own, see Freddoso 2002 (esp. xxvii–xxviii). For a very different interpretation, see Wippel 2000, ch. 5.

I realize that my position on these issues is controversial, and that nothing I've said is likely to be satisfying to anyone not already open to my interpretation. I also realize that there are other respects in which my description of Aquinas's ontology might be regarded as incomplete.<sup>40</sup> I hasten to emphasize, therefore, that nothing in the book turns on my claim that Aquinas's ontology includes *only* the elements in my description. On the contrary, what's important for my purposes, and what I focus on establishing in the book, is the claim that Aquinas's ontology includes *all* the elements in my description. For the sake of simplicity, I will continue to speak of this description as if it were a complete list of the elements in Aquinas's ontology. But those who disagree are welcome to take it as a merely partial description, and to supplement it with their own preferred list of additional elements.

Assuming my description of Aquinas's ontology is correct, it should be clear that there are four main ontological types in terms of which the world as a whole can be understood:

#### Four Aristotelian Ontological Types

- (1) Prime Matter
- (2) Form
- (3) Substance
- (4) Accidental Unity

Each of these four types represents a distinct or irreducible type of being, and is regarded by Aquinas as in some sense basic or fundamental. Questions can be raised about whether these four types represent Aquinas's most basic or fundamental ontological types. I shall return to these questions in the next chapter, when I take up Aquinas's views about the ten Aristotelian categories (§2.4). For now, however, I want to focus on Aquinas's understanding of the types themselves.

### 1.3 Prime Matter

In some ways, prime matter is the most distinctive type of being there is for Aquinas. Although it qualifies as a primitive or basic type of being, and hence one not ultimately susceptible to analysis or explanation, its nature can be clarified via certain

<sup>40</sup> For example, it might be wondered how my description of Aquinas's ontology fits with his commitment to successive entities (*entia successiva*), to beings of reason (*entia rationis*), and to the doctrine that real being comes in degrees. I cannot discuss these matters here. But see Brower and Brower-Toland 2008 (esp. 231–3) for a deflationary understanding of Aquinas's commitment to beings of reason, and Brower 2004a (esp. 224–7) for a model suggesting that Aquinas's commitment to degrees of real being does not require anything over and above substances and accidents. For discussion of successive entities, see Pasnau 2011, ch. 18.

of its distinguishing features or characteristics. We have encountered some of these already. Thus, we have seen that prime matter is the ultimate substratum for compounds in the corporeal world (namely, material substances and material unities). Again, we have seen that prime matter is closely connected with spatial extension. The possession of prime matter serves as the mark of materiality in the ordinary or familiar sense of the term. Finally, we have seen that prime matter is the only type of being that exists in pure potentiality. Unlike forms, prime matter is not itself an actuality, and unlike substances or accidental unities, it is not a being in actuality. This last characteristic of prime matter, its pure potentiality, turns out to be especially important, for it entails two further characteristics or features that we have not yet discussed.

The first is the radical dependency of prime matter. As Aquinas sees it, the very notion of potentiality implies dependency. Indeed, it is precisely for this reason that he thinks God must be characterized as pure actuality. But, then, if God's pure actuality entails his radical independence, we might expect that prime matter's pure potentiality would entail its radical dependence. But what does such dependency amount to and what is it about prime matter that leads Aquinas to think it must be characterized by it?

All creatures, as we have seen, are characterized by a sort of radical dependency on God, in that they are essentially dependent on him both for their initial and for their continued existence. Aquinas thinks that prime matter is characterized by the same sort of dependency on creatures because it is essentially dependent on certain forms and compounds (namely, substantial forms and material substances), both for its initial and for its continued existence. The reason for this has to do with the way in which prime matter possesses actuality. Insofar as prime matter is a being in pure potentiality, it has no form or actuality through itself, but only via inherence. But, given the close connection between actuality and existence, for Aquinas, this just entails that prime matter cannot exist without some form inhering in it. Indeed, for prime matter to exist, he says, just is for it to have actuality in this way, and hence to be a part of a larger compound. For the same reason, he insists, not even God in his omnipotence could create or sustain prime matter on its own.<sup>41</sup>

The radical dependency of prime matter, and its connection to pure potentiality, is well known and often remarked on. But there is another distinguishing feature of prime matter, also closely connected with pure potentiality, that has been overlooked by Aquinas's commentators (almost to a person)—namely, its non-individuality. According to Aquinas, there are two conditions that must be satisfied in order for something to qualify as individual. First, it must have actuality through itself; and second, it must belong to some natural kind or species. Insofar as prime matter is a being in pure potentiality, it clearly fails the first condition. Only forms, substances,

<sup>41</sup> See, e.g., *Quod*. 3.1.1, which Wippel (2000, 25) describes as Aquinas's "finest metaphysical statement" of the view that matter cannot exist apart from any form.

and compounds have actuality through themselves. But insofar as prime matter is a being in pure potentiality, Aquinas thinks that it also fails the second condition. For strictly speaking, only something that has actuality through itself can be said to belong to a natural kind (or species), and hence possess a common nature (or quiddity).<sup>42</sup>

Although prime matter fails both of the conditions just mentioned, and hence lacks individuality in the strict and proper sense, it must be recognized that Aquinas speaks in ways that might suggest otherwise.<sup>43</sup> Thus, he often speaks as if there were something common to all portions of prime matter, something that marks out a “natural kind” to which they could all be said to belong. Indeed, Aquinas habitually refers to the “nature” (*natura*) or “essence” (*essentia*) of prime matter; and in various contexts, he distinguishes “individual” from “common” matter (*materia individualis* vs. *communis*), precisely to bring out the contrast between distinct portions of prime matter and their common “nature”.<sup>44</sup>

We must not, however, be misled by such ways of speaking. For in each case, Aquinas is using the relevant terms in extended senses.<sup>45</sup> Thus, even though distinct portions of prime matter do not possess a nature (or quiddity) in the strict and proper sense, they can be said to possess one insofar as they have a distinctive character, one in virtue of which they exactly resemble one another.<sup>46</sup> Indeed, it is precisely this distinctive character that Aquinas means to be emphasizing when he speaks of prime matter’s “nature” or “essence”. Again, when Aquinas speaks of “individual” vs. “common” matter, he does so not only to contrast distinct portions of prime matter with their common character or respect of resemblance, but also to emphasize the role that such portions play in his views about “individuation” (*individuatio*). According to Aquinas, the distinctness of material substances or bodies is ultimately to be explained in terms of the distinctness of their prime matter (or substrata).<sup>47</sup> Insofar as distinct portions of prime matter play this individuating role, Aquinas refers to them as “individual” in an extended sense.

As all of this helps us to see, *prime matter* is like other types of being in one respect, but different in another. For just as there can be distinct instances of *form*, *substance*, and *accidental unity*, so too, Aquinas thinks, there can be distinct portions of *prime*

<sup>42</sup> See Ch. 5 (esp. §5.5), where I discuss these conditions, as well as Aquinas’s understanding of prime matter and individuality, at much greater length.

<sup>43</sup> No doubt this helps to explain why commentators have overlooked the non-individuality of prime matter.

<sup>44</sup> See, e.g., *DEE* 2 and *QDP* 9.1 ad 6, and many of the texts cited in Wippel 2000, §9.2 (“The Nature of Prime Matter”).

<sup>45</sup> See again n. 10, this chapter, for Aquinas’s tendency to distinguish a multiplicity of senses for a single term. See also the entries on ‘nature’ and ‘individual’ in the Appendix.

<sup>46</sup> See *QDV* 3.5 ad 3, where Aquinas makes explicit that prime matter does not itself have an essence but is part of the essence of a material substance.

<sup>47</sup> See *In CA* 9 for a particularly clear text. See Brower 2012b and Wippel 2000, §9.4 for further discussion.



*matter*. But unlike other types of beings, distinct portions of prime matter are not individual. Indeed, in this regard they are more like what contemporary philosophers call *stuff* rather than *things*.

I will have more to say about the non-individuality of prime matter when we turn in the next chapter to the comparison of Aquinas's views with those of contemporary philosophers (§2.2). For now, however, let us proceed to Aquinas's understanding of the next Aristotelian ontological type—namely, *form*.

## 1.4 Form

When Aquinas wants to distinguish forms from the members of the other Aristotelian ontological types, he typically does so by describing them as *inherent* rather than *subsistent* beings. As already noted, Aquinas conceives of inherence itself as a primitive type of dependency, one built into the very nature of forms or properties.<sup>48</sup> It is important to emphasize, however, that this type of dependency is less radical, in a certain respect, than that associated with prime matter. For although forms or properties are essentially dependent on substrata (and hence on other creatures) *for their initial existence*, they are not essentially dependent on them *for their continued existence*.<sup>49</sup> On the contrary, Aquinas thinks that even though God cannot create forms or properties apart from any substrata, he can sustain them in existence in this way once they have been created. Indeed, Aquinas thinks he regularly does so in the context of the sacrament of the Eucharist (§11.1).<sup>50</sup>

As we can now see, the sense in which inherence is built into the nature of forms or properties must be carefully stated. For although forms or properties cannot come into existence non-inhering, they can continue to exist without inhering in anything. We might put this by saying that forms or properties are not essentially dependent on substrata as such, but rather essentially dependent on them *for their origins*. But even in the case of non-inhering forms or properties, there remains a further kind of dependency on substrata. For even though it is logically possible for pre-existing forms to exist apart from any substrata, Aquinas thinks it takes special divine intervention, or a miracle, for this possibility to be realized. Thus, in all of what we might call the *naturally possible worlds*—that is, all possible worlds in which God does not supernaturally intervene—the separation of some form or property from its

<sup>48</sup> See, e.g., SCG 2.71.2: "A form is united to matter without any intermediary. For to be the actuality of a body of some kind belongs to a form by its very nature, and not by anything else."

<sup>49</sup> The dependency of forms on substrata for their initial existence is part of Aquinas's more general views about individuation. For a clear statement of such dependency in the specific case of the substantial form (or soul) of human beings, see DEE 5.69–71: "The individuation and multiplication of souls depends on the body at the beginning, but not at the end." See also Brower 2012b for further discussion.

<sup>50</sup> See ST 1.66.1 ad 3, where Aquinas insists that the pure potentiality of prime matter makes it more "repugnant" for it to exist without form than for an accident, which is a kind of actuality, to exist without a substratum.

substratum results in its destruction.<sup>51</sup> Even non-inhering forms or properties, therefore, retain a kind of essential dependence on substrata; they are, as it were, *essentially disposed* to inhere in them in the sense that they will so inhere unless God supernaturally intervenes to prevent this disposition from being actualized. In light of all this, we might say that although inherence is not to be understood, for Aquinas, in terms of essential dependence on substrata *as such*, it can be understood in terms of a *natural dependence* on them, where the latter notion involves both an essentiality of origins and a type of essential disposition.

Although the type of dependency associated with forms or properties is, in one respect, weaker, or less radical, than that associated with prime matter, it is important to see that, in another respect, it is equally strong or radical. For both types of dependency require a kind of necessary connection to hold between beings that are distinct from and wholly extrinsic to one another. Indeed, unlike the relation of creation, which holds between God and creatures, the relata for each of these further types of dependency are always creatures.

One further point about Aquinas's understanding of forms or properties. We have seen that Aquinas recognizes the need to distinguish individuals from the general kinds that they fall under. He is also aware that certain philosophers have felt the further need to explain kind membership, both here and in general, by appealing to universal forms or properties. Even so, he himself regards this sort of explanation as unnecessary:

Even if *this* individual [say, Socrates] is a human being and *that* individual [say, Plato] is a human being, it is not necessary that both have numerically the same humanity—any more than it is necessary for two white things to have numerically the same whiteness. On the contrary, it is [only] necessary that the one resemble the other in having an [individual] humanity just as the other does. (*In Sent.* 2.17.1.1)

Aquinas's views about universals will not be a central focus of this study, since most of the issues that I'll be addressing are independent of them. Still, in the context of his ontology as a whole, it is important to emphasize that Aquinas denies the existence of universals of any sort outside the mind. For the same reason, moreover, he is committed to the view that all beings are either individuals or constituent parts of individuals (and in the special case of prime matter, a constituent part which itself lacks individuality).<sup>52</sup>

## 1.5 Substance vs. Accidental Unity

As in the case of the other Aristotelian ontological types, *substance* and *accidental unity* represent distinct or irreducible types of being for Aquinas. Nonetheless, it will

<sup>51</sup> Except in the special case of human beings, where the substantial form or soul is, by nature, capable of independent existence. Again, I'm ignoring such complications here. See Chs 11–12.

<sup>52</sup> I discuss Aquinas's views about universals in Brower 2012a.

be useful to begin by considering what they share in common before turning to their distinguishing features or characteristics.

As we have seen, prime matter is non-inherent (or subsistent), but non-individual, whereas forms are individual, but non-subsistent (or inherent). By contrast, substances and accidental unities are both subsistent and individual. Aquinas sometimes expresses the latter point by saying that substances and accidental unities don't merely subsist, but rather subsist *through themselves* or *on their own* (*per se subsistere*). As this way of putting things helps to emphasize, he thinks of substances and accidental unities as having a kind of independence lacked by both prime matter and forms. It is difficult to know exactly how to characterize such independence. As subsistent beings, substances and accidental unities obviously lack the sort of dependency associated with forms or properties. And as individuals, they can at least be sustained in existence apart from distinct forms or compounds.<sup>53</sup> But Aquinas sometimes speaks as if their independence involved more than this. Obviously, as creatures, substances and accidental unities are essentially dependent on God. And insofar as they are composed of matter and form, they are also essentially dependent on certain creatures. Perhaps the point is simply that they have a kind of independence from all creatures that are both distinct from and extrinsic to them. But even here, it is hard to tell exactly what the point is. It might be merely a conceptual one—that the concept of a substance or accidental unity differs from that of prime matter or form insofar as it does not make reference to any concepts wholly distinct from it. I'm not sure.

But however the independence of substances and accidental unities is ultimately to be understood, it will be useful in what follows to have a single term to identify the two characteristics that both of these types of being share in common—namely, subsistence and individuality. I propose to use the term 'particular' for this purpose and stipulate that we understand the contrast between particulars and non-particulars as follows:

#### Particulars vs. Non-Particulars

- *Particular* =<sub>def</sub> A being that is both subsistent and individual.
- *Non-Particular* =<sub>def</sub> A being that is either non-subsistent or non-individual.

Aquinas himself uses the term 'particular' (*particularis*) more or less synonymously with 'individual' (*individualis*), and it is natural to do so in English as well. Indeed, in the contemporary literature non-universal properties (or tropes) are often referred to

<sup>53</sup> Or at least there is nothing in their being individuals that rules this out. A complication arises, however, when it comes to *propria* or necessary accidents. See §2.3 and §4.4 for more on accidents of this type.

as *abstract particulars*. Even so, I want to restrict the term ‘particular’ here to individuals of a certain type—individuals that do not inhere. Although this is somewhat artificial, and the restriction will prevent us from saying that forms or properties are particulars, it will be useful for identifying what distinguishes substances and accidental unities from prime matter and forms.

Having examined what substances and accidental unities share in common (namely, particularity in my technical sense), let us now consider what distinguishes them.

Substances, as we have seen, can be either simple (as in the case of immaterial substances) or complex (as in the case of material substances). Insofar as substances are complex (or material), moreover, they are composed only of prime matter and substantial form, neither of which qualifies as particular in the technical sense (since prime matter is not individual, and forms are not subsistent). Substances, therefore, can be described as *basic particulars* in the sense that they are particulars that are not themselves composed of other particulars.<sup>54</sup> By contrast, accidental unities must be described as *non-basic particulars*. For they are not only particulars, but also composed of substances and accidents, the former of which are themselves particulars. In short, the distinction between substances and accidental unities can be understood in terms of the contrast between basic and non-basic particulars. For the sake of future reference, let us set out this contrast explicitly as follows:

#### Basic vs. Non-Basic Particulars

- *Basic Particular* =<sub>def</sub> A particular that is not itself composed of any particulars.
- *Non-Basic Particular* =<sub>def</sub> A particular that is composed of at least one particular.

In light of the foregoing, it should be clear that Aquinas’s understanding of substance must be distinguished from various traditional conceptions that are often associated with Aristotle. Such conceptions typically identify one or more of the following characteristics as distinctive of substances: subsistence, subjecthood (i.e., being a substratum for properties), or independent existence. As we can now see, however, although Aquinas’s understanding of substance has important connections to each of these characteristics, it cannot be fully understood in terms of any of them. Subsistence, for example, is too broad. All substances subsist, for Aquinas, but not all subsistent beings are substances (as the case of prime matter makes clear). Subjecthood, by contrast, is too narrow. For although most of Aquinas’s substances serve as

<sup>54</sup> The conception of substances as basic particulars helps to explain why integral parts and elements must be regarded as merely potential for Aquinas. If Socrates were literally composed of such parts, then he’d be composed of other substances or particulars, and hence himself qualify as an accidental unity.

substrata for properties, not all of them do (as the case of God makes clear). Finally, independent existence is too narrow in one respect, and too broad in another. God is the only truly independent being, for Aquinas, but he is not the only substance. And although there is a sense of independence (or completeness of being) that can be applied both to God and created substances, it also applies to accidental unities.

Evidently, therefore, it is only by conceiving of Aquinas's substances as basic particulars that we can distinguish them from both accidental unities and the other Aristotelian ontological types. Conceiving of them in this way, moreover, helps to explain one further distinguishing feature or characteristic that Aquinas often attributes to them—namely, *per se* or essential unity. Only essential unities or substances can be said to have a nature or essence in the strict or proper sense. By contrast, the members of the other Aristotelian types can be said to have an essence only in a qualified or extended sense. And the reason, in each case, is that the beings in question are not basic particulars.

In an important passage in his *De ente et essentia*, Aquinas summarizes, in his own way, all the various points that I have been making. The passage is, therefore, worth quoting at length:

Just as a substantial form does not exist separately from that in which it inheres, neither does that in which the form inheres—namely, [prime] matter—exist separately. What results from their union, therefore, is a type of being in which something subsists through itself, and what is produced from them is an essential unity (*unum per se*). For the same reason, what results from their union is a certain type of essence. Hence, although the form is not a complete essence considered in itself, it is part of a complete essence. By contrast, that in which an accident inheres is a complete being in itself, subsisting in its own being. Indeed, such a being naturally precedes the accident that comes to it. Hence, what results from the union of such an accident with that in which it inheres is not a type of being in which something subsists by virtue of the fact that it is an essential being (*ens per se*). On the contrary, what results is a type of secondary being, without which the [original] subsisting thing can be understood to exist—just as anything primary can be understood without what is secondary. Hence, what is produced from an accident and its subject is not an essential unity, but an accidental unity (*unum per accidens*). Likewise, what results from their union is not the type of essence that results from the union of [substantial] form and [prime] matter. For the same reason, an accident is not a complete essence nor part of a complete essence. On the contrary, just as it exists only with qualification, so too it has an essence only with qualification. (*DEE* 6.24–49)

Aquinas begins this passage by telling us that prime matter and substantial form are dependent in a way that substances are not. For whereas substances subsist through themselves, prime matter and substantial form both depend on each other (and also any substance they compose) for their existence—and this despite the fact that prime matter can be said to subsist. Aquinas then proceeds to discuss the relationship between substances and accidental forms and unities. Insofar as accidental forms are inherent rather than subsistent, it is clear that they do not subsist in themselves. Indeed, as inherent beings, they would seem to be characterized by the same sort of

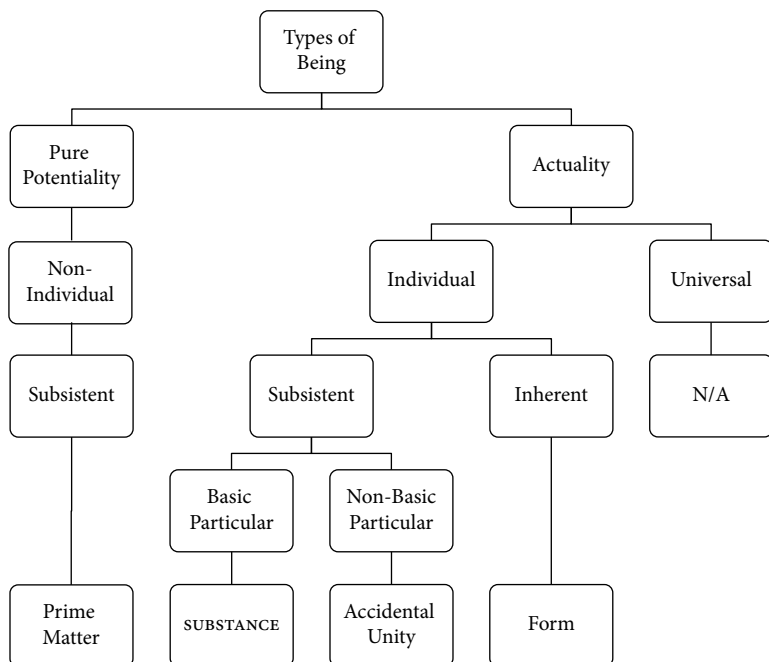


Figure 1.5 Aquinas's Understanding of the Four Aristotelian Types

dependency as substantial forms. By contrast, accidental unities would seem to subsist in the same way that substances do. Even so, Aquinas insists, they are not essential but accidental unities—and this precisely because they are not the “first” but the “second” such beings to subsist in this way. And the clear implication is that accidental unities are “second” in this respect because they are composed of subsistent individuals or particulars. Indeed, as we can now see, it is precisely because Aquinas conceives of substances as basic particulars that he cannot conceive of prime matter as individual. For if it were individual, it would have to be particular (since it also subsists), and hence there could be no substances composed of it (but only accidental unities). In fact, if prime matter were individual (and hence particular), it would be the only type of substance (or basic particular) in the material world.<sup>55</sup>

For the sake of future reference, it will be useful to bring together all the various distinctions we've been drawing and use them to express Aquinas's understanding of the four Aristotelian ontological types, as I have in the chart at Fig. 1.5.

Aquinas often speaks as if *substance* were the central or most important Aristotelian ontological type, forming the very subject matter of metaphysics. (To indicate

<sup>55</sup> See *In Meta.* 8.1.1689, for another context in which Aquinas argues that if prime matter had actuality through itself, and hence qualified as a basic particular, this would undermine the essential unity of any composite of which it is a part.

this in the chart, I have put the term in small caps.) We are now in a position to appreciate why he speaks in this way. First, Aquinas thinks that *substance* is the only one of our four Aristotelian types that has any real application to both God and creatures. In this respect, it is broader than the other types, which strictly apply only to creatures.<sup>56</sup> Second, the fact that *substance* has application to God gives it special significance. As we have seen, God is not only the ultimate source of all being, including the members of all the other types, but he also belongs to the only type that can be said to include a member that is absolutely independent. Third and finally, *substance* is distinguished by the dependency relations that hold between its members and those of the other types. Thus, although not all substances depend for their existence on other types of being, all other types of being depend for their existence on substances—and not only on God, but also on other created substances. Thus, prime matter can only exist as a constituent part of created substances; forms can only exist (at least initially) either as constituent parts of created substances (in the case of substantial forms) or as inherent properties of such substances (in the case of accidental forms); and accidental unities can only exist as complexes partly composed of created substances. In all three of these respects, therefore, *substance* stands apart from the other types of being.

This completes my sketch of Aquinas's ontology, as well as his understanding of the four main Aristotelian ontological types in terms of which it is to be understood. In the next chapter, I will clarify the historical and philosophical significance of Aquinas's ontology by comparing his views with those of certain other medieval and contemporary philosophers.

<sup>56</sup> As indicated in nn. 7 and 27, Aquinas also allows that *form* can be applied to God, but only in an extended (non-hylomorphic) sense. Among medieval philosophers, it was generally agreed that *substance* has a special sort of application to God. Particularly influential here is Augustine's claim in *De Trinitate* 5.2.3 that, of all the Aristotelian categories, *substance* is the one most applicable to God, and Boethius's claim in his *De Trinitate* 4 that God's substance is "beyond substance" or "supersubstantial" and hence that all intrinsic predications of God must be understood as substantial predications. There were, of course, debates about whether *substance* applies to God in the same sense as it applies to creatures. I will have more to say about these debates in Ch. 2 (esp. §2.4).

It is worth noting that Augustine also suggests at *De Trinitate* 5.8.9 that perhaps the Aristotelian category of action is the one that most truly applies to God, and that both Augustine and Boethius give a special place in their discussions to the Aristotelian category of relations. See Friedman 2013 for the significance of all this for medieval developments in theology and philosophical psychology.

## 2

# Filling out the Sketch

In Chapter 1, I offered a sketch of Aquinas's complete ontology. In this chapter, I fill out the sketch by situating Aquinas's ontology relative to three different contexts: (a) late medieval ontology in the Latin West, especially in the 13th and 14th centuries; (b) some important contemporary metaphysical debates, especially in 20th- and 21st-century Anglo-American analytic philosophy; and (c) Aquinas's own distinctive understanding of the ten Aristotelian categories. In addition, I aim to clarify the historical and philosophical significance of Aquinas's views, as well as to anticipate a number of conclusions to be further developed and defended in subsequent chapters.

### 2.1 Late Medieval Ontology

Most philosophers of the 13th and 14th centuries, perhaps of the scholastic period as a whole, would have agreed with Aquinas about the basic contents and structure of the world, including each of the following points:

#### **Late Medieval Agreement about the Contents and Structure of Reality**

- (a) The world can be exhaustively divided into God and creatures.
- (b) God is a simple, incorporeal substance (or spirit).
- (c) Creatures are a mix of simple and complex, corporeal and incorporeal beings, where these include both ordinary material substances (or bodies) and created spirits.
- (d) Unlike creatures, God is not subject to hylomorphic analysis.

In addition to such agreement about the contents and structure of the world, medieval philosophers also generally agreed with Aquinas about the general ontological types in terms of which the world itself can be understood, including:

#### **Late Medieval Agreement about Ontological Types**

- (e) All beings, including God, can be understood in terms of four Aristotelian ontological types: *prime matter*, *form*, *substance*, and *accidental unity*.
- (f) *Substance* occupies a special place among these four Aristotelian types, with the others all being somehow dependent on it.



Against the background of such general agreement, there were of course a number of hotly disputed issues. Here are a few representative examples that bear directly on specific aspects of Aquinas's ontology:

#### Some Representative Late Medieval Ontological Debates

- (a) Do universals exist in addition to individuals?
- (b) Are hylomorphic compounds distinct from their constituent matter and form?
- (c) Do created immaterial substances lack prime matter?
- (d) Does each of the four Aristotelian types represent a distinct or irreducible type of being?
- (e) Do God and creatures qualify as substances in the same sense?
- (f) Can prime matter be coherently characterized as pure potentiality?

Debates (a), (b), and (d) are representative examples of late medieval debates about the contents of the world.<sup>1</sup> Interestingly, almost all parties agreed that beings of the sort in question exist in some sense. In the case of universals, the important question was not *whether* they exist, but *where*. In particular, do they exist outside the mind, or only in thought or language?<sup>2</sup> In the case of compounds or beings of one of the specific Aristotelian types, the important question was not *whether* or *where* but *how* they exist.<sup>3</sup> In particular, are they distinct beings, or is their existence somehow reducible to or derivative of that of other beings?<sup>4</sup>

<sup>1</sup> For discussion of examples of many other debates of this type—including debates over the existence of integral parts, haecceities, modes, relations, and other such beings—see Pasnau 2011.

<sup>2</sup> It is extremely hard to find non-controversial examples of any medieval philosophers, from the early or late Middle Ages, who accepted a version of what philosophers would nowadays call *realism about universals*. (William of Champeaux, the 12th-century contemporary of Peter Abelard, may be among the few exceptions in this regard.) From the perspective of the 21st century, therefore, the main question at issue in medieval debates about universals is which form of nominalism to adopt. (The qualification 'from the perspective of the 21st century' is important. According to another classification, perfectly consistent with this one and prevalent historically, many medieval philosophers, including Aquinas and Scotus, qualify as moderate realists or even conceptualists, but certainly not nominalists.)

I shall not have much to say about Aquinas's views about universals in this book, since they do not bear on the main issues that I'll be discussing. I do, however, discuss them at length in Brower 2012a, where I also argue that they can be used to provide a taxonomy of the main types of position on universals that were adopted in the Middle Ages.

<sup>3</sup> Debate (b) is an instance of a more general medieval debate about the relationship between parts and wholes. It might seem obvious that wholes are distinct from their parts, since they are composed of them and composition seems to be a one-many relation holding between distinct relata. But this was, in fact, a hotly disputed issue during the later Middle Ages. See the discussion of the *part-whole identity thesis* in Pasnau 2011, §28.5.

<sup>4</sup> And there were also debates about how sameness and distinctness should be understood. See Suarez, *Metaphysical Disputations* 7 for a summary of some of these debates. See also Menn 1997 for helpful discussion.

Debates (b) and (c) are representative examples of late medieval debates about hylomorphism and its precise application to the created world. This is perhaps obvious in the case of (b). For in addition to raising questions about the contents of the created world, this debate also raises questions about its hylomorphic structure. But debate (c) is also representative of medieval debates in this regard. Indeed, there was an important group of philosophers in the 13th and 14th centuries—the so-called universal hylomorphists—who insisted, against Aquinas, that all created substances must be said to have prime matter. For the same reason, such philosophers typically distinguish two fundamentally different types of prime matter—corporeal and incorporeal—and insist that bodies are composed of prime matter of the first sort, whereas angels or created spirits are composed of prime matter of the second sort.<sup>5</sup>

Finally, debates (d)–(f) are all representative examples of late medieval debates about the proper understanding of the four Aristotelian ontological types themselves. As already noted, debate (d) is closely connected to questions about the contents of the world, and to debate (b) in particular. As it turns out, some late medieval philosophers—such as Ockham—admit the existence of accidental unities but deny their irreducibility, precisely because they think of hylomorphic compounds in general as nothing over and above their constituent matter and form.<sup>6</sup> As for debate (e), it raises well-known questions about the way in which Aristotelian types can be applied to God, and in particular whether God and creatures can be spoken of univocally or only analogically. Finally, debate (f) focuses on one of the most controversial aspects of Aquinas's ontology as a whole—the coherence of his conception of prime matter. This is one of the few late medieval controversies on which virtually everyone came down on the opposite side of Aquinas, including some of his own later followers and sympathizers, such as Suarez.

In what follows, I want to take a closer look at this final debate—namely, (f).<sup>7</sup> This debate not only represents one of the most important ontological divides separating Aquinas from his contemporaries, but also provides some insight into a standard late medieval alternative to Aquinas's understanding of the four Aristotelian types. Moreover, a closer look at this debate will help prepare the way for a comparison of Aquinas's views with those of some of our contemporaries.

The following simple argument captures what was (and perhaps remains today) the chief source of difficulty with Aquinas's conception of prime matter as pure potentiality—namely, that it appears to be straightforwardly inconsistent:

<sup>5</sup> I take up the issue of universal hylomorphism at some length in §8.3.

<sup>6</sup> See again Pasnau 2011, §28.5; see also Normore 2006.

<sup>7</sup> I will, however, return to Aquinas's views about the sense in which both God and creatures are substances in §2.4.

**The Simple Argument**

- (1) If prime matter is a being in pure potentiality, it has no actuality.
- (2) But prime matter exists, and whatever exists has actuality.
- ∴ (3) Prime matter cannot be a being in pure potentiality, but must rather be a being in actuality.

In the context of late medieval ontology, the premises of this simple argument appear to be both obvious and unavoidable. What is more, Aquinas himself appears to be committed to them. After all, what could it mean to say that prime matter is pure potentiality if not that it lacks actuality? And how could prime matter be a substratum for forms or properties, much less perform the other theoretical tasks Aquinas assigns to it (e.g., in the context of change and individuation), if it does not exist? But Aquinas clearly thinks that existence requires actuality.<sup>8</sup>

The standard late medieval response to this problem was simply to reject Aquinas's conception of prime matter as pure potentiality. As we have seen, however, this conception of prime matter is essentially bound up with a specific understanding of the four Aristotelian ontological types—one according to which prime matter is a type of non-individual being. In rejecting this conception of prime matter, therefore, Aquinas's critics were, in effect, forced to produce an alternative understanding of the four Aristotelian ontological types. Although various alternatives were proposed, one standard example accepted by many 13th- and 14th-century philosophers, including Scotus and Ockham, is represented in the diagram at Fig. 2.1.

As the diagram is intended to make clear, this alternative understanding of the four Aristotelian types retains a number of the elements of Aquinas's own understanding, including the connection between actuality and individuality, as well as an exhaustive division of beings into subsistent and inherent.<sup>9</sup> At the same time, however, this alternative does not allow for any beings that exist merely in potentiality, and hence rejects what Aquinas takes to be one of the distinguishing features of prime matter (namely, its non-individuality). For the same reason, it also rejects his understanding of the difference between substances and accidental unities (namely, that the former are basic particulars, whereas the latter are non-basic particulars).<sup>10</sup> Indeed, insofar as prime matter is a being in actuality, it must now be regarded as a type of basic particular; and insofar as there are substances composed of such matter,

<sup>8</sup> See, e.g., *ST* 1.5.1 ad 1: "The term 'being' (*ens*) properly expresses that something exists in actuality."

<sup>9</sup> See again the diagram at Fig. 1.5 in Ch. 1. Some philosophers, such as Scotus and Ockham, prefer to speak of forms as *informing* their subject, and to reserve all talk of inherence for the specific way that accidental forms inform their subject. But we can ignore this complication here.

<sup>10</sup> Recall that I am using 'basic particular' in a technical sense to mean a particular (or subsistent individual) not composed of any other particulars (or subsistent individuals). Talk of what is "basic" in this context, therefore, should not be confused with what is fundamental or ontologically committing. See again §1.5.

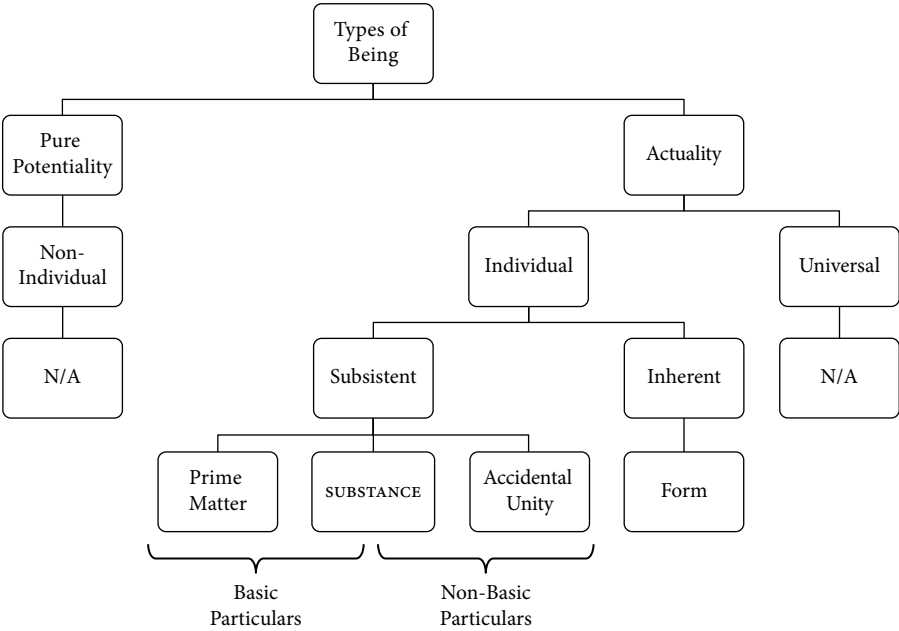


Figure 2.1 An Alternative Understanding of the Four Aristotelian Types

some substances must be regarded as non-basic particulars as well. In light of all this, it should come as no surprise that proponents of this standard alternative typically regard prime matter as a primitive or *sui generis* type of particular; and likewise for substances and accidental unities, insofar as they represent distinct or irreducible types of being. What’s more, insofar as these same proponents regard prime matter as a type of basic particular, they also typically assert, against Aquinas, that God could create such matter, as well as sustain it in existence, independently of any other forms or compounds.<sup>11</sup>

So much for the problem with Aquinas’s conception of prime matter, and the response of his critics. What about Aquinas’s own response?

Aquinas seems not to have been aware of the problem raised by his views about prime matter. It is not surprising, therefore, that he never explicitly addresses what I am calling the *simple argument*. Even so, I think it’s clear that he would have rejected its first premise. Aquinas never says that a being in pure potentiality must lack being or actuality altogether, but only that it must lack being or actuality *through itself* (*per se*).<sup>12</sup> As this latter way of speaking suggests, and as our previous discussion would seem to confirm (§1.3), Aquinas thinks that there are two different ways in which something can possess actuality, and hence two different senses in which

<sup>11</sup> See §§5.4–5 for references and discussion.  
<sup>12</sup> See again §5.5 for relevant passages and discussion.

something can qualify as a *being in actuality*. In a broad sense, anything that exists in any way whatsoever can be said to have actuality, and hence qualify as a being in actuality. In this broad sense, even prime matter must be regarded as a being in actuality, since it has form or actuality inhering in it. (Hence the falsity of the first premise of the argument.) In a narrower sense, however, only things that have actuality *through themselves*—that is, only things that have actuality in the way that substances, accidental unities, and forms do—can be regarded as beings in actuality. Obviously, in this narrow sense, prime matter does *not* qualify as a being in actuality.<sup>13</sup>

If I'm right about all this, Aquinas's conception of prime matter avoids the main problem that has traditionally been leveled against it and, contrary to the late medieval consensus, his preferred understanding of the four Aristotelian ontological types can be upheld. Of course, questions can still be raised about what it means to say that prime matter exists (or possesses actuality) in a way that differs from all other types of being. We have seen that, in one sense, there are no answers to these questions. The difference between prime matter and all other types of being—or that between pure potentiality and a being actuality (in the narrow sense)—is a primitive or basic one for Aquinas. Ultimately, therefore, one either “gets it” or not.<sup>14</sup> Having said that, we have also seen that Aquinas makes considerable effort to help us understand his conception by calling our attention to what he takes to be some of prime matter's distinguishing features (including its connection to extended objects or bodies, its radical dependency on other creatures, and its non-individuality). As I shall now attempt to show, moreover, if we consider these same features in the context of certain contemporary metaphysical debates, we can get some further insight into Aquinas's conception of prime matter, as well as his ontology as a whole.

## 2.2 Stuff vs. Things

It is becoming increasingly common, among contemporary metaphysicians, to distinguish ontologies that include *stuff* (ironically, in a technical sense) from ontologies that include only *things* (again, in a technical sense), where the distinction between stuff and things is itself taken to represent one of the most fundamental ontological divides.<sup>15</sup> In principle, we can distinguish three different sorts of ontology here:<sup>16</sup>

<sup>13</sup> See the entry on ‘being in actuality’ in the Appendix for the relationship between these senses, as well as one further sense discussed in §1.1. See also §§5.4–5 for a more detailed discussion of the nature or being of prime matter.

<sup>14</sup> Of course, those who don't “get it” are likely to think the problem owes not to any failing on their part but rather to the fact that there is nothing here to be “got”.

<sup>15</sup> To cite just one example, consider the following passage from McDaniel 2010b, 25:

Some philosophers have thought that the most fundamental ontological difference is the difference between *things* and *stuff*. On their view, reality divides into entities and non-individuated matter or stuff.

<sup>16</sup> The descriptions that follow are simplified versions of those given in Markosian 2004, 412–13.

**Three Contemporary Ontologies**

- *Stuff ontology* =<sub>def</sub> The view that only stuff exists.
- *Thing ontology* =<sub>def</sub> The view that only things exist.
- *Mixed ontology* =<sub>def</sub> The view that both stuff and things exist.

Aquinas's ontology can be usefully described as a mixed ontology, one in which prime matter is identified with stuff, and substances, accidental unities, and forms are identified with distinct types of things (or *entities*, as things in the technical sense are sometimes referred to). This description of Aquinas's ontology is, I think, naturally suggested by what we've already seen of his views. But it can be reinforced by a brief comparison with the views of one of the most prominent contemporary mixed ontologists, Ned Markosian.

Like Aquinas, Markosian introduces the distinction between stuff and things in the context of providing an ontology of ordinary material objects—what Markosian himself calls *physical objects* and identifies with things having spatial location. Like Aquinas, moreover, Markosian thinks of portions of stuff, not as coming in fundamentally different kinds (e.g., *water, gold, wood*), but rather as all being of a single fundamental type.<sup>17</sup> Finally, like Aquinas, Markosian thinks of stuff as a primitive or basic type of being, and hence one whose nature cannot be analyzed or ultimately explained but must rather be clarified in terms of its distinguishing features. The following is a sampling of some of the substantive theses about stuff that Markosian advances as part of his attempt to identify its distinguishing features:<sup>18</sup>

**Markosian Stuff**

- (1) Stuff is distinct from things.
- (2) Stuff is what ordinary physical objects—that is, things having spatial location—are made of.
- (3) Stuff cannot exist without things.

As should be clear, these three theses are very similar to claims that Aquinas himself makes about prime matter. Indeed, like Aquinas's prime matter, Markosian's stuff is (a) distinct from the beings that are made of it, (b) the source of materiality in the ordinary or familiar sense of the term, where this is closely connected with spatial location (or corporeality), and (c) such that, presumably, not even God could create

<sup>17</sup> See §9.1, however, for a complication regarding Aquinas's views about types of prime matter or stuff.

<sup>18</sup> The following are my paraphrases of the more technical theses listed at (1)–(3) in Markosian 2004, 409.

it, or sustain it in existence, apart from any things. The nature of these similarities, as well as the common strategy required by both Aquinas and Markosian to clarify the nature of their respective matter, reinforces the suggestion that Aquinas's ontology can be usefully thought of as a mixed ontology of stuff and things.

Although Aquinas's views about stuff are similar to Markosian's in each of the respects just mentioned, there is also an important respect in which they differ. As we have seen, Aquinas thinks of the relation between stuff and things in broadly compositional terms. Indeed, Aquinas thinks of ordinary material objects as composed of prime matter or stuff in the same way that complexes or facts are composed of substrata and properties.<sup>19</sup> By contrast, Markosian explicitly denies that the relation between stuff and things can be understood in any such terms. Markosian is happy to speak of ordinary material objects as being *made of* stuff, and he recognizes that this locution is often used in ordinary speech to express some sort of *composition*. Even so, he denies that this is how the locution should be understood in the context of his own mixed ontology. On the contrary, he insists that in this context it expresses a *sui generis*, non-mereological relation that has yet to be given a standard name.<sup>20</sup>

There are other important respects in which Aquinas's views about stuff differ from Markosian's.<sup>21</sup> But I mention this one here for two reasons. First, it highlights a respect in which the overarching structure of Aquinas's mixed ontology is different from that of one of its chief contemporary representatives. Second, this difference helps to remind us that Aquinas's views about stuff cannot be separated from his broader views about substrata, properties, and complexes—a topic to which I now want to return.

## 2.3 Substratum Theory

In order to bring out one final aspect of Aquinas's ontology, which is distinctive from the perspective of contemporary metaphysical debates, I want to compare his views about substrata, properties, and complexes with those of contemporary substratum theorists. In contemporary philosophy, substratum theory is almost always developed in the context of a thing ontology and in such a way as to constitute a perfectly general theory of substances and their attributes. We can, I think, summarize the core theses of contemporary substratum theory as follows:

<sup>19</sup> As this way of putting things helps to emphasize, the sense in which hylomorphic compounds are composed of matter and form is very different from the way in which things are composed of ordinary material parts. See again Ch. 1, n. 9, as well as §8.1 for further discussion of hylomorphic composition.

<sup>20</sup> See Markosian 2004, 407 where he stipulates that we refer to this relation as *constitution*, but hastens to distinguish this from other, more familiar uses of the term.

<sup>21</sup> I discuss some of these in §§5.4–5.

**Contemporary Substratum Theory—Core Theses**

- (a) Both substrata and properties exist.
- (b) Substrata and properties belong to distinct or irreducible types of thing (or entity).
- (c) Substrata = bare particulars (i.e., a *sui generis* type of particular distinct from the properties it possesses).
- (d) Substances are always associated with substrata (i.e., substances are identical either to substrata or to things having substrata).
- (e) Substances possess all of their properties in the same way—that is, either essentially or accidentally.
- (f) Accidental properties = contingent properties, whereas essential properties = non-contingent properties.

Theses (a)–(c) clarify the sense in which contemporary substratum theory fits within the broader context of a thing ontology, with (c) in particular explaining why bare particularism is, in effect, the only type of substratum theory that receives any attention nowadays.<sup>22</sup> Theses (d)–(f), by contrast, clarify the sense in which contemporary substratum theory constitutes a perfectly general theory of substances and their attributes.<sup>23</sup>

Although contemporary substratum theorists typically agree on these core theses, they disagree over certain further details, including the precise nature of both (i) the broader thing ontology of which these theses are a part, and (ii) the general theory of substances and attributes that goes along with these same theses. With regard to thing ontology, perhaps the main disagreement concerns the existence of facts (or concrete states of affairs)—or better, whether the existence of such facts (or states of affairs) can be reduced to other types of being. Here we can distinguish two main positions—what David Armstrong calls *factualism* and *thingism*, respectively.<sup>24</sup>

**Contemporary Substratum Theory—Ontological Disagreement**

- *Factualism* =<sub>def</sub> The view that facts comprise a distinct or irreducible type of being.
- *Thingism* =<sub>def</sub> The view that facts do not comprise a distinct or irreducible type of being (either because there are no facts, or because they can all be reduced to substrata and their properties).

<sup>22</sup> See §6.1 for a division of substratum theory into six different types, with bare particularism representing only one possible variation of one of these types.

<sup>23</sup> Prominent defenders of this understanding of substratum theory include Alston 1954; Armstrong 1989 and 1997; Bergmann 1947, 1964, and 1967; Martin 1980; Russell 1948; and Sider 2006. See Bailey 2012 for further references and discussion. See also Chs 6–7 (esp. §§6.1–2 and §§7.1–2) for further discussion of the core theses.

<sup>24</sup> The following is based on Armstrong 1997, §1.2 (esp. 3–4).



Armstrong regards thingism as the theory of choice for substratum theorists of the past (though he also thinks of it as having a contemporary supporter in C. B. Martin). By contrast, Armstrong regards factualism as a distinctively modern form of substratum theory—one that didn't really come into its own until the 20th century, perhaps not before the publication of Wittgenstein's *Tractatus*. Indeed, Armstrong intends his suggested names for these two positions to put us in mind of Wittgenstein's famous endorsement of factualism in the *Tractatus* (1.1): "The world is the totality of facts, not things."<sup>25</sup>

Although there is nothing about factualism as such that requires the identification of the world itself with a fact, or even a collection of facts, it is worth noting that most contemporary factualists follow Wittgenstein in accepting such an identification. For the same reason, they typically assume that *facts* comprise one of the most basic or fundamental ontological types, along with *substratum* and *property*.

One final point. As talk of facts vs. things in this context helps us to see, the term 'things' is itself multiply ambiguous in contemporary metaphysics. Sometimes it is used in a broad sense to refer to entities of any sort. This is the sense at issue in debates about things vs. stuff—that is, debates about whether stuff exists in addition to (or instead of) things. But other times the term 'things' is used in a narrower sense to refer to specific sorts of entity—namely, particulars and properties. This is the sense at issue in debates about thingism vs. factualism—that is, debates about whether facts exist in addition to (or perhaps even instead of) particulars and properties.<sup>26</sup>

Having examined what is perhaps the main ontological disagreement among contemporary substratum theorists, let us now turn to their disagreements about substances and attributes, where the main dispute here concerns the precise relationship of substances to the substrata or bare particulars with which they are associated.

It used to be common for substratum theorists to identify substances with bare particulars, and hence to say that substances possess all of their properties accidentally or contingently (since this is how bare particulars are said to possess their properties). Although this theory of substance is common among thingists, it is also endorsed by at least some factualists—including, arguably, Wittgenstein. But other factualists, such as Armstrong, prefer another sort of theory—one according to which substances are identified not with any substrata or bare particulars, but rather with complexes or facts that exist when such substrata themselves instantiate properties.

<sup>25</sup> For a detailed investigation of Armstrong's factualism, see McDaniel 2009b.

<sup>26</sup> Armstrong sometimes speaks of particulars and properties as "abstractions", which might suggest that both can be somehow reduced to facts or states of affairs. This would, I think, be a misunderstanding of his notion of abstraction, which is primarily epistemological in nature (see Armstrong 1997, §8.3, esp. 123–4). In any case, I shall assume that Armstrong's facts are best understood along the lines suggested in McDaniel 2009b, and hence that they possess both particulars and properties as distinct and irreducible proper parts or constituents.

This theory has the consequence that substances possess all of their properties essentially or non-contingently (since this is how complexes or facts are said to possess their constituent properties).<sup>27</sup> Adapting some terminology from Armstrong, we can refer to these two positions as *thin* and *thick particularism*, respectively.<sup>28</sup>

#### Contemporary Substratum Theory—Disagreement about Substances

- *Thin Particularism* =<sub>def</sub> The view that substances are identical to bare (or thin) particulars, and hence possess all of their properties accidentally.
- *Thick Particularism* =<sub>def</sub> The view that substances are identical to facts (or thick particulars) that include bare (or thin) particulars and properties as constituents, and hence possess all of their properties essentially.

So much for contemporary substratum theory. Let us now see how Aquinas's views compare with it, beginning with their relationship to the core theses.

As it turns out, there is only one core thesis of contemporary substratum theory that Aquinas can be said unequivocally to endorse—namely, that (a) both substrata and properties exist. As for all the other theses, (b)–(f), he rejects at least some aspect of each. There are a few different reasons for this. First, Aquinas develops his views about substrata, properties, and complexes as part of a mixed ontology of stuff and things (rather than merely as part of a thing ontology). Thus, unlike contemporary substratum theorists, he does not think that (b) substrata and properties belong to distinct types of thing, or that (c) substrata = bare particulars. On the contrary, he thinks of substrata in purely functional terms (i.e., as whatever can serve as a subject of inheritance for properties), and hence as a type of being that includes both stuff and things.<sup>29</sup>

Second, Aquinas does not intend his preferred type of substratum theory to constitute a perfectly general theory of substance. That is to say, unlike contemporary substratum theorists, he does not think that (d) substances are always associated with substrata. On the contrary, Aquinas characterizes substances in such a way as to leave open the possibility of substances without substrata, at least in the special case of God. At most, therefore, Thomistic substratum theory constitutes a general theory of *created* substances.<sup>30</sup>

<sup>27</sup> See §6.2 for further discussion.

<sup>28</sup> This terminology derives from Armstrong 1997, 124. See §6.2 for further discussion of these positions.

<sup>29</sup> See again the discussion of matter as substratum in §1.1. See also the further discussion in §§3.2–3 and §5.2, as well as the entry on 'matter' in the Appendix.

<sup>30</sup> Although both God and created substances are basic particulars, only created substances serve as the substratum for distinct forms or properties. See §2.4 for further discussion of the differences between God and created substances.

Third and finally, even in the case of created substances, Aquinas draws a distinction between two different types of forms or properties—those possessed via inherence and those possessed via constituency. And in the case of these same substances, he denies that (e) substances always possess their properties in the same way and that (f) accidental properties = contingent properties, whereas essential properties = non-contingent properties. Indeed, insofar as Aquinas thinks that some created substances possess some of their inherent properties non-contingently, he is perfectly happy to add that there can be necessary accidents.<sup>31</sup>

For the sake of completeness, it may be useful to summarize Thomistic substratum theory in a way that brings out its relationship to each of the core theses of contemporary substratum theory:

#### Thomistic Substratum Theory—Core Theses

- (a) Both substrata and properties exist.
- (b\*) Properties belong to a distinct or irreducible type of thing (or entity), but substrata belong to a purely functional type that encompasses both stuff and things.
- (c\*) Substrata = portions of prime matter (or stuff) and created substances.
- (d\*) Substances are NOT always associated with substrata, though created substances always are (i.e., only *created* substances are identical to substrata or to things having substrata).
- (e\*) Some substances possess all of their properties in the same way (namely, via inherence), whereas others do not (either because they do not possess any properties or because they also possess some properties via constituency).
- (f\*) Accidental properties = inherent properties, whereas essential properties = constituent properties.

Consider next how Aquinas's views situate him relative to the disagreement among contemporary substratum theorists about factualism vs. thingism. Here, what is most interesting to note is that Aquinas clearly sides with the factualists against the thingists. For as already noted (§1.1), insofar as Aquinas's substratum-property complexes comprise a distinct or irreducible type of being—*hylomorphic compounds*—they are best thought of as facts (or concrete states of affairs).<sup>32</sup> This is interesting in part because it shows that it is a mistake to suppose, as Armstrong and others do, that factualism makes its first real appearance on the philosophical scene

<sup>31</sup> See §4.4 for more on necessary accidents.

<sup>32</sup> See Chs 3–4 (esp. §4.4) for the defense of this conception of hylomorphic compounds. See also the entry under 'compound' in the Appendix for different senses of the term.

only in the 20th century.<sup>33</sup> Of course, this is not to deny that there are important differences between Aquinas's factualism and that of our contemporaries. To mention only the most obvious: unlike contemporary factualists, Aquinas does not regard facts as among the most basic or fundamental types of being. On the contrary, he thinks of them comprising a general type, *hylomorphic compound*, which is best understood in terms of two more specific, and also more fundamental, types, *material substance* and *accidental unity*.<sup>34</sup> What is more, we have seen that Aquinas thinks there is at least one thing in the world—namely, God—that cannot be a part of any compound, as well as certain other things—such as forms—that can be sustained in existence by God apart from all compounds. For the same reason, it should be clear that Aquinas cannot be said to identify the world itself with a totality of facts *versus* things—though perhaps he can still be said to identify it with a totality of facts *plus* things (i.e., hylomorphic compounds *plus* God and whatever else he supernaturally sustains in existence apart from such compounds).<sup>35</sup>

Clearly, differences such as these are important. And they may well enable us to identify a *specific type* of factualism that is distinctively modern (namely, one takes the world to be a totality of facts), as well as to explain why factualism as such is so often taken to be a post-20th-century phenomenon (namely, because irreducibility is often taken to be sufficient for fundamentality). Even so, I think it cannot be denied that Aquinas is a factualist rather than a thingist in the sense defined previously.

Let us consider, finally, how Aquinas's views situate him vis-à-vis disagreements about thin vs. thick particularism. Here things are particularly interesting. For in one respect, Aquinas agrees with thin particularists; in another respect, he agrees with thick particularists; and in yet another, he disagrees with both. Thus, he agrees with thin particularists in thinking that *some* substances—namely, created spirits or angels—are identical to their substrata, and hence can be said to possess all of their properties accidentally. Indeed, for Aquinas, created spirits or angels are very similar to bare particulars, insofar as they comprise a *sui generis* type of particular distinct from, or having its identity independently of, any of the properties it possesses.<sup>36</sup>

<sup>33</sup> It also makes unnecessary any speculation as to why previous philosophers habitually overlook this irreducible type of being. See, e.g., Armstrong 1997, §1.2 (and the sources cited therein) for the common suggestion that this "oversight" has something to do with the failure to admit polyadic properties into fundamental ontology.

<sup>34</sup> Another, perhaps less obvious difference has to do with the relationship between facts and ordinary objects. Thus, whereas Aquinas identifies ordinary substances or artifacts, such as Socrates or a bronze statue, with a single compound or fact, many contemporary factualists take such objects to be somehow constructed out of a number of such facts (namely, those that share a common bare particular). This is certainly true in the case of Armstrong. See §6.2 for further discussion.

<sup>35</sup> This suggests yet a further sense in which Aquinas's ontology is mixed. Indeed, we might say it is a mixed ontology of stuff and things, as well as of facts and things. I will have more to say in §2.4 about how Aquinas's mixed ontology fits with the division of reality into substances and accidents—and in particular with his suggestion that all beings can somehow be traced back to the members of this division. See also §10.1.

<sup>36</sup> Even God is not unlike a bare particular, for Aquinas, provided that we allow that such particulars can exist apart from any properties whatsoever, which at least some contemporary defenders of bare particulars are prepared to do. See Sider 2006.

Despite agreeing with thin particularists in this respect, Aquinas agrees with thick particularists in thinking that *some* substances—namely, material substances or bodies—are identical to complexes or facts that include substrata and properties as constituents, and hence can be said to possess these same properties essentially. Admittedly, there are some important differences between Aquinas's material substances and substances as they are usually conceived of by thick particularists. Aquinas does not, for example, take the constituent properties of such substances to exhaust their properties. On the contrary, he thinks such substances also serve as the substratum for further properties, which are merely accidental or non-essential (even if non-contingent). What's more, the substrata of Aquinas's material substances are not to be identified with particulars of any sort, much less bare particulars. On the contrary, they are to be identified with portions of prime matter or stuff. This latter difference is, of course, an extremely important one. Even taking it into account, however, I think there remain good grounds for saying that Aquinas accepts a form of thick particularism with regard to material substances. At one place in his writings, Armstrong colorfully describes thick particularism as the view that substances are "layer cakes" in which the substratum is "the nut at the center".<sup>37</sup> To bring out the relevant similarity to Aquinas's thick particularism, we can describe it as the view that material substances are layer cakes with "pudding" at the center. Same type of cake, different filling.

Despite agreeing with both thin and thick particularists in these respects, there is a further respect in which Aquinas disagrees with both. For, as we have seen, he denies certain claims that are constitutive of both views, including each of the following: (i) that substances are all associated with substrata, (ii) that substances are all associated with substrata in the same way, and (iii) that substances possess all of their properties in the same way. It is precisely because Aquinas rejects (i) that his form of substratum theory is not itself a complete theory of substance, but is rather one part of such a larger theory (according to which substances are best thought of as basic particulars). It is precisely because he rejects (ii) that he can accept a form of thin particularism with regard to one type of substance (namely, immaterial substances or spirits), and a form of thick particularism with regard to another (namely, material substances or bodies). And it is precisely because he rejects (iii) that he is able to distinguish the essential vs. accidental properties of substances.

Obviously much more could be said about the topics already discussed in this chapter. And, indeed, much more will be said about many of them in the chapters that follow. Before closing, however, I must touch on one final topic that no treatment of Aquinas's ontology would be complete without—his views about the ten Aristotelian categories. As will become clear, Aquinas's views on this score are extremely difficult to comprehend. For the same reason, my discussion of them will be somewhat exploratory, and my conclusions about them somewhat tentative.

<sup>37</sup> Armstrong 1989, 60.

## 2.4 Types vs. Modes of Being

So far our discussion of Aquinas's ontology has focused on his understanding of four Aristotelian ontological types—*prime matter*, *form*, *substance*, and *accidental unity*. There is, however, another set of Aristotelian ontological types in which *substance* figures prominently—the ten Aristotelian categories. In the context of this second set of types, however, *substance* is contrasted not with *prime matter*, *form*, and *accidental unity*, but rather with nine types of *accident*—namely, *quantity*, *quality*, *relation*, *action*, *passion*, *place*, *time*, *position*, and *habit*. The fact that Aquinas habitually appeals to both sets of ontological types in his description of the world raises an obvious question. How are they related?

There are actually two questions to be distinguished here. The first is what we might think of as a mapping question. How are the ontological types associated with Aquinas's fourfold division of being to be mapped, if at all, onto the members of his tenfold division of being (or vice versa)? The second question is what we might think of as a fundamentality question. Which of the types associated with these two divisions, if either, represent Aquinas's most fundamental ontological types? Although neither of these questions can ultimately be resolved apart from the other, it will be useful to start by trying to address them separately, beginning with the mapping question.<sup>38</sup>

Aristotle's ten categories are often thought to provide a division of different *types* of being. If we assume, for the moment, that this is how Aquinas is thinking of them, then we can describe the relationship between his two divisions in terms of partial overlap. Or better, we can describe their relationship in terms of complete overlap with respect to substances, partial overlap with respect to forms, and complete non-overlap (or disjointedness) with respect to everything else. On this interpretation, Aquinas will take the Aristotelian category of substance to include all and only those beings falling under *substance* in the sense of his fourfold division (namely, basic particulars). He will take the nine Aristotelian categories of accident to include some, but not all, of those beings that fall under *form* in his fourfold division (namely, inherent beings). As for the rest of the forms (namely, substantial forms), as well as the beings associated with the other members of Aquinas's fourfold division (namely, prime matter and accidental unities), they won't be strictly included under any of the ten Aristotelian categories for Aquinas—though they won't be wholly unrelated to them either. For in the case of prime matter and substantial forms, they are constituent parts of the beings falling under the Aristotelian category of substance.

<sup>38</sup> One might also wonder how Aquinas's fourfold division relates to the fourfold classification of beings introduced at *Categories* 1a20, using the notions of *said of* vs. *present in*. Here, too, one could perhaps distinguish versions of both the mapping and fundamentality questions. I shall not attempt to address such questions here, but see Hansen 2012 for some discussion of a standard medieval understanding of the relationship of Aristotle's fourfold classification of beings to his ten categories.

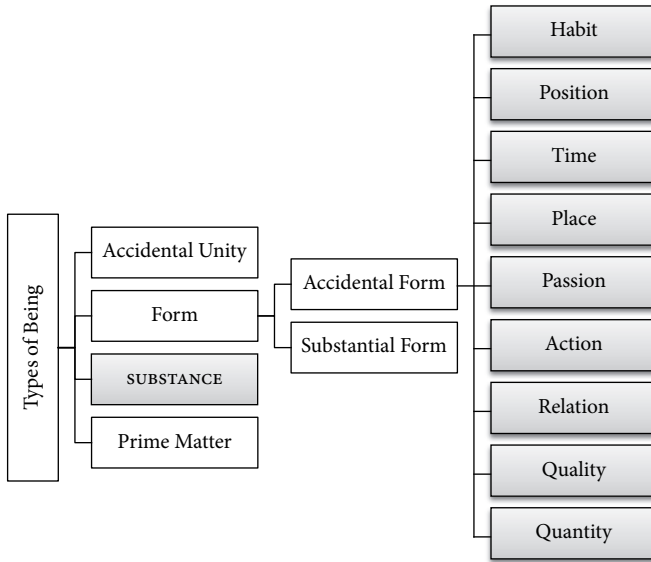


Figure 2.2 Initial Mapping of the Two Divisions

And in the case of accidental unities, they are objects composed of beings falling under the Aristotelian categories of substance and accident.

Assuming that this is the correct interpretation of Aquinas's two divisions, we can represent the mapping of their members in accordance with the chart at Fig. 2.2. Each of the horizontal boxes in this chart represents a type of being. The first column of such boxes represents the members of Aquinas's fourfold division, whereas the shaded boxes, regardless of the column in which they appear, represent the members of his tenfold division of being. On this mapping of the two divisions, Aquinas's fourfold division subsumes his tenfold division. For according to it, the Aristotelian category of substance corresponds exactly to the notion of a basic particular, and the nine Aristotelian categories of accident correspond to different possible specifications of the notion of an accidental form or inherent being.

Commentators on Aristotle now typically assume that his theory of the categories and hylomorphism represent distinct and incompatible stages of his intellectual development, and hence that it would be unreasonable to expect there to be a genuine mapping from one to the other. Like other medieval philosophers, by contrast, Aquinas takes for granted that both theories are part of a single, coherent philosophical system, and hence that the two must fit together in some way.<sup>39</sup> If the initial

<sup>39</sup> See Studtmann 2011 for a survey of contemporary and medieval views regarding the relationship of Aristotle's theory of the categories to his hylomorphism. See also Pasnau 2011, §12.1.

mapping at Fig. 2.2 is correct, we have a straightforward explanation of how they fit together. The substances and accidents of the ten Aristotelian categories provide the matter and form for one type of hylomorphic compound (namely, accidental unities), whereas certain of these same substances (namely, material substances) have matter and form of a different kind (namely, prime matter and substantial form).<sup>40</sup>

This initial mapping would seem to fit well with Aquinas's suggestion, in certain contexts, that everything somehow traces its being back to (*reducere ad*) Aristotle's division of substance and accident. For insofar as accidental unities are compounds whose form (or actuality) is provided by Aristotelian accidents, their being clearly depends on such accidents.<sup>41</sup> And insofar as prime matter and substantial form cannot exist apart from the substances of which they are a part, their being is clearly dependent on such substances. Indeed, insofar as prime matter and substantial form are parts of substances, Aquinas thinks they can be said to belong to the Aristotelian category of substance in an extended sense (*per reductionem*).<sup>42</sup>

Despite the promise of this initial mapping, it cannot be said to represent Aquinas's own views about the relationship between his two divisions—and this for two reasons. First, Aquinas is explicit that God cannot be included under any of the ten Aristotelian categories, and hence cannot be regarded as a substance in the sense associated with his tenfold division of being. The reason for this has to do with God's distinctive mode of being. Insofar as God is an absolutely independent being, Aquinas insists that he exists in a way that is radically different from creatures—so different that he cannot be said to fall under any genus or species associated with the Aristotelian categories.<sup>43</sup> Even so, we have seen that this does not prevent Aquinas from describing God as a substance in the sense associated with his fourfold division of being, and hence as a basic particular.

If this were the only objection to our initial mapping, it would be easy enough to revise the chart at Fig. 2.2 so as to avoid it. For what the objection seems to show is that Aquinas does not take the notion of a basic particular to represent one of the most fundamental types of being. On the contrary, he takes it to represent a type of being that can be further subdivided into two more fundamental types—*God* and

<sup>40</sup> Of course, this mapping assumes that the Aristotelian categories comprise ten mutually exclusive classes of beings. Although this assumption was often challenged by medieval philosophers, especially in the case of the last six categories (more on this shortly), it was sometimes accepted. See the discussion in Klima 1999.

<sup>41</sup> Indeed, it is perhaps for this reason that Aquinas sometimes refers to accidental unities themselves as 'accidents'. See §1.2, n. 22.

<sup>42</sup> See, e.g., QDV 27.1 ad 8. It is important not to misunderstand Aquinas's talk of "reduction" in this context. As suggested in the text, the Latin term '*reducere*' literally means *to trace back* (not *to eliminate* or even *fully to explain*). When Aquinas says that prime matter and substantial form belong to the category of substance "reductively" (*per reductionem*), therefore, he doesn't mean to suggest that they are nothing over and above substances, or even that they are themselves properly described as substances. On the contrary, for reasons that will become clear in Chs 3–4, prime matter and substantial form must be described as distinctive types of being in their own right, despite their close connection to substances.

<sup>43</sup> See, e.g., ST 1.3.5 and SCG 1.25.



*created substance*. Indeed, I think it is precisely because the latter two types are more fundamental than *substance*, for Aquinas, that he insists that God and created substances themselves can be spoken of as substances only analogically, not univocally.<sup>44</sup> In any case, if something like this is right, then our initial mapping could easily be revised so as to avoid the objection—namely, by treating the Aristotelian category of substance not as identical to the notion of a basic particular, but rather as a specification of it, just as the nine Aristotelian categories of accident are treated as specifications of the notion of a form or inherent being. Indeed, such a revision would seem to capture the standard medieval view that the ten Aristotelian categories apply only to *created beings*.<sup>45</sup>

As it turns out, however, there is another problem with the initial mapping that even this revision will not fix. And this second problem appears, at least initially, to be much more serious than the first.

I have said that Aquinas thinks of the Aristotelian categories as applying only to created beings. But it would be more accurate to say that he thinks of them as applying only to created *modes of being* (*modi essendi*).<sup>46</sup> It is difficult to know exactly what Aquinas has in mind by a mode (as distinct from a type) of being. This notion is clearly connected for him with the idea that being or existence is not univocal—that is to say, with the idea that different types of being can exist in different ways.<sup>47</sup> Eventually I will suggest that this idea can be made intelligible by thinking of modes of being in terms of what is expressed by different types of existential quantifier. For now, however, it will be useful to focus on a very broad understanding of modes, one that allows us to say that there are as many modes or ways of existing as there are types of being:

### Mode of Being

*F-ness* is a mode of being if and only if something does (or can) exist as an *F*.

As with our original understanding of types of being (§1.1), this understanding of modes is obviously too broad to be of much use in ontology. For modes in this broad sense are no more connected with the ultimate structure of the world than are types of being. But here, as previously, we can restrict our attention to a relevant subset—all and only those that are fundamental. And given the close connection between types and modes of being, it would seem that we can achieve the relevant restriction simply

<sup>44</sup> See, e.g., *ST* 1.13.5.

<sup>45</sup> As already indicated (§1.5, esp. n. 56), this way of thinking about the Aristotelian categories owes much to Augustine's discussion in *De Trinitate*, esp. Bks 5–7, but it was also given influential statement in Boethius's treatise by the same name.

<sup>46</sup> For texts and discussion, see Wippel 1987 and §9.3, this volume.

<sup>47</sup> See, e.g., *In Phys.* 3.5.15: "Being is divided into the ten categories not univocally, as a genus into its species, but according to distinct modes of being."

by focusing on modes associated with fundamental types of being. Indeed, if we consider the different ways in which fundamentally different types of being exist, I think we can see that the notion of mode is really the one doing the explanatory work for Aquinas.<sup>48</sup>

Consider again God and created substances. They belong to fundamentally different types—*God* and *created substance*, respectively. But as we have seen, they appear to belong to such types, for Aquinas, precisely because they exist in fundamentally different ways. Thus, it is because God exists in the mode of *absolute independence*, whereas created substances do not, that the general type *substance* must itself be further subdivided into the more specific, and also more fundamental, subtypes *God* and *created substance*. Indeed, as I see it, it is for just this reason that these two subtypes are specifications of an analogous type rather than species of a common genus.

Note, however, that something similar can be said of all the members of Aquinas's fourfold division. For not only do they all belong to fundamentally different types of being—*prime matter*, *form*, *substance*, and *accidental unity*, respectively—but they appear to do so because they exist in fundamentally different ways. Thus, prime matter exists in the mode of *non-individuality*, forms exist in the mode of *inherence*, substances exist in the mode of *basic particularity*, and accidental unities exist in the mode of *non-basic particularity*. And here again, and for precisely the same reason, we would appear to have distinct types that must be understood via analogy rather than genus and species relations. Indeed, when we take the two sets of types together, we can see that Aquinas allows for nested hierarchies of analogous types. Thus *being* is divisible into four main analogates, at least one of which, *substance*, can be subdivided into further analogates—*God* and *substance*. In each case, moreover, the divisions are to be understood in terms of increasingly fundamental modes of being. Thus, we might say that, although God and created substances are distinguished from all other types of being in virtue of existing in the mode of *basic particularity*, they are distinguished from each other in virtue of existing in the distinct modes of *independent* vs. *dependent basic particularity*.

The foregoing is, I hope, enough to provide an intuitive sense of the distinction between types and modes of being. Indeed, as I hope is now clear, for something to belong to some type of being *F*, for Aquinas, just is for it to possess the corresponding mode of being *F-ness* (or to exist *F-ly*). I will return shortly to the question of what exactly this talk of modes comes to, as well as its significance for Aquinas's complete ontology. But first I want to note that we are already in a position to answer the two questions with which we began our discussion—namely, the mapping and fundamentality questions.

<sup>48</sup> Near the end of this section, I will suggest that thinking of modes as prior to types in this respect also helps to make sense of Aquinas's commitment to cross-categorical identification—that is, to the view that a single being can belong to more than one fundamental ontological type or category.

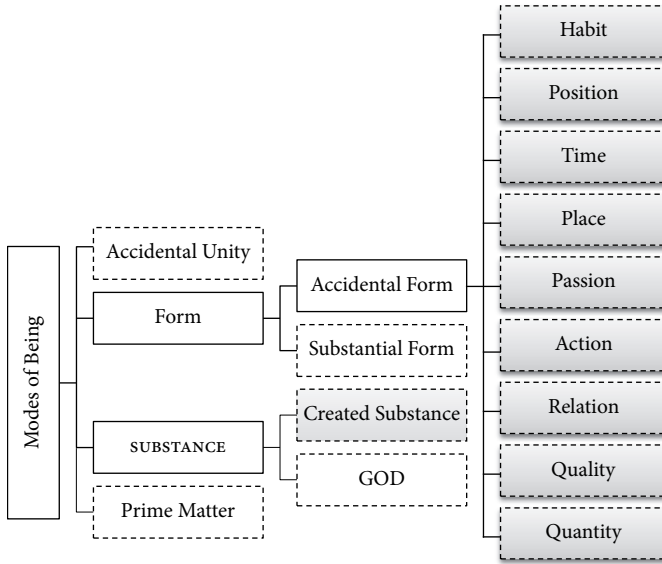


Figure 2.3 Revised Mapping of the Two Divisions

On first encountering Aquinas's restriction of the Aristotelian categories to created modes of being, we noted that it appears to raise a problem for our initial mapping of his two divisions. For this restriction initially appears to require that we think of the divisions themselves as dealing with different things—namely, modes of being in the case of his tenfold division, and types of being in the case of his fourfold division. But as we can now see, this is merely an appearance. For given the correspondence between types and modes, both divisions can be understood in either way. Indeed, given the explanatory priority of modes, I think it is clear that, for Aquinas, both divisions should be understood primarily in terms of modes. If we return to our initial mapping with this in mind, as well as the solution to the other problem we encountered, I think we can see that the relationship between the members of Aquinas's two divisions should ultimately be understood in accordance with the chart at Fig. 2.3.

The chart given here is exactly like that given in our initial mapping (at Fig. 2.2) in all but three respects. First, each of the horizontal boxes now represents a mode rather than a type of being (though each box is still correlated with a type of being). Second, *substance* is now explicitly represented as dividing into *God* and *created substance* (where the latter, for Aquinas, is just *substance* in the sense associated with the Aristotelian categories). Finally, each box that occurs at a terminal node is now surrounded by dotted lines. I will return to the significance of this last difference shortly.

Because of the close resemblance of this chart to that given in our initial mapping, it preserves an important assumption about Aquinas's two divisions—namely, that

his fourfold division subsumes his tenfold division. For the same reason, it also upholds the tight connection between his hylomorphism and his understanding of the Aristotelian categories. Indeed, as this revised chart helps to make clear, Aquinas's fourfold division can be thought of as subsuming both his hylomorphism and his understanding of the Aristotelian categories. For insofar as God falls outside the scope of Aquinas's hylomorphism, the latter is restricted to a specific type of substance (namely, created substances). And insofar as both God and substantial forms fall outside the scope of Aquinas's understanding of the Aristotelian categories, the latter is restricted to a specific type of substance and form (namely, created substances and accidental forms).<sup>49</sup>

As with our previous chart in Fig. 2.2, that in Fig. 2.3 also preserves the idea that everything somehow traces its being back to the division between substances and accidents. Indeed, insofar as everything is dependent on God, there is a sense in which it can be said that everything traces its being back to a type of substance (even if to one that falls outside of the Aristotelian categories). Even within the created realm, however, it can still be said that everything traces its being back to substances and accidents, insofar as the modes of being associated with accidental unities depend on that of accidents, and the modes of being associated with prime matter and substantial form depend on that of created substances.

In addition to providing an answer to our mapping question, the chart in Fig. 2.3 also provides an answer to our fundamentality question. For the divisions in this chart result in modes that are not only increasingly specific, but also increasingly fundamental. For the same reason, boxes occurring at terminal nodes of division are intended to represent the most fundamental modes of being for Aquinas (this is the point of surrounding such boxes with dotted lines). Thus, when it comes to Aquinas's fourfold division, we can now see that only two of its members correspond to modes that are ultimately fundamental—*prime matter* and *accidental unity*. As for the other members of this same division—*substance* and *form*—although they do not themselves correspond to such modes, certain of their specifications do. Thus, two of Aquinas's most fundamental modes are given by specifications of *substance*—*God* and *created substance*—and ten more such modes are given by specifications of *form*—*substantial form* and the nine specifications of *accidental form*.

Up to this point, we have often spoken as if there were just one fundamental mode of being shared by both substantial and accidental forms—*inherence*. But as we can now see, this is not strictly correct. The fact that Aquinas conceives of the nine Aristotelian accidental categories in terms of nine more fundamental specifications of *accidental form* would seem to require that substantial and accidental forms exist in fundamentally different ways. But the same conclusion is also plausible given the different ways in which substantial and accidental forms enter into Aquinas's

<sup>49</sup> Though again, this is not to deny that, at least in the case of substantial forms, they can be said to belong to the category of substance in an extended sense (or *per reductionem*).

hylomorphism. For even if we think of all such forms as properties, they are still associated with very different types of substrata and compounds. Thus, substantial forms inhere in prime matter (which is non-individual stuff), and thereby enter into material substances (which are basic particulars). By contrast, accidental forms inhere in substances (which are not only individual, but basic particulars), and thereby enter into accidental unities (which are non-basic particulars).<sup>50</sup> It is natural to suppose that properties associated with such fundamentally different types of substrata and complexes would themselves exist in fundamentally different ways.<sup>51</sup>

In the end, therefore, Aquinas appears to recognize fourteen fundamentally different modes, in terms of which all other modes and types of being are to be understood. We can, perhaps, bring out the significance of Aquinas's views in this regard by saying that his complete ontology includes fourteen ultimate *categories* of being.<sup>52</sup> One of the central tasks of metaphysics, traditionally associated with Aristotle, is that of providing a complete list of ontological categories. Followers of Aristotle have often thought that he provides (or at least intended to provide) just such a list in his short work, the *Categories*. As Aquinas sees it, however, this isn't quite right. For although this work does provide us with a *partial* list of such categories, perhaps all those that can be arrived at via reflection on the nature of predication, for a *complete* list we must also look to certain of Aristotle's other works, including his *Physics* and *Metaphysics*. Indeed, if what I have been suggesting in this section is correct, reflection on the Aristotelian corpus as a whole (as well as certain theological considerations) leads Aquinas to postulate fourteen different categories of being in all—the ten associated with Aristotle's *Categories*, three more associated with his hylomorphism, and one final category for God.<sup>53</sup> Admittedly, Aquinas himself never states his views in these terms. In fact, since he associates the term 'category' (*praedicamentum*) with the specific modes of being associated with Aristotle's tenfold division in the *Categories*, and is often at pains to show how all (created) being can somehow be traced to this same division, we might expect Aquinas to resist the description of his complete list of fundamental modes as 'categories'. Even so, from our perspective, I think this description helps to clarify the significance of Aquinas's views.

So far so good. But there still remains the question of how exactly modes themselves are to be understood for Aquinas. As noted earlier, this is a difficult question to answer. The difficulty, as I see it, owes in large part to the fact that

<sup>50</sup> See again the passage from *DEE* 6, discussed in §1.5, where Aquinas distinguishes the substrata for substantial and accidental forms both in terms of the kind of being or actuality they receive from such forms, and by the types of unity they thereby enter into.

<sup>51</sup> Indeed, even later medievals, who reject Aquinas's conception of prime matter, seem to agree with him on this score, often reserving the term *inherence* for the special mode of being associated with accidents and speaking of *substantial union* when they want to refer to the mode associated with substantial forms. See Chs 11–12 for more on the significance of this difference.

<sup>52</sup> Here, and in what follows, I'm indebted to McDaniel 2011.

<sup>53</sup> See §11.5 for a further complication raised by the special case of the human soul.

Aquinas develops his views about modes in terms that are unfamiliar to most of us.<sup>54</sup> Fortunately, however, some recent developments in metaphysics provide us with a way of clarifying Aquinas's views that avoids this difficulty.

There is a growing literature in contemporary metaphysics devoted to the topic of *ontological pluralism*—that is, the view that there are distinct modes or ways of being—and a number of contemporary philosophers have come to the defense of this view.<sup>55</sup> In particular, in a series of recent articles, Kris McDaniel has developed a neo-Aristotelian formulation that I think helps to dispel much of the mystery surrounding traditional Aristotelian ontology.<sup>56</sup> As it turns out, this formulation relies on resources not available to Aquinas himself, perhaps not to anyone prior to the 20th century (hence the aptness of its description as '*neo-Aristotelian*'). Even so, because these same resources are now so familiar, and because I think we can do justice to Aquinas's own views from within McDaniel's framework, I will briefly indicate the light it sheds on Aquinas's ontology as a whole.

We can think of McDaniel's neo-Aristotelian formulation as developing in four steps.<sup>57</sup> The first involves distinguishing restricted vs. unrestricted quantification—or better, restricted vs. unrestricted quantifier expressions. This step is perhaps the least controversial or most familiar. For natural languages, such as English, appear to come equipped with both types of quantifier—that is, with a perfectly unrestricted quantifier, which ranges over all of what there is, and with more restricted quantifiers, which range over only some of what there is. In contemporary logic, it is standard to use the expression ' $\exists x$ ' to stand for the unrestricted quantifier and to use variations on this expression, typically involving subscripts, to stand for restricted quantifiers—say, ' $\exists x_g$ ' and ' $\exists x_c$ ' in the case of quantifiers ranging over God and created substances, respectively.

The second step is to allow that quantifiers of both types can be semantically simple or primitive. Ordinarily, the meaning of a restricted quantifier is taken to be definable in terms of that of the unrestricted quantifier plus some restricted predicate or operator (indeed, this is suggested by their standard symbolization in terms of subscripts). And perhaps this is how the meanings of restricted quantifiers actually work in English. Even so, there is nothing to exclude the possibility of a language in which the meanings of restricted quantifiers are undefinable, and hence the quantifiers themselves are taken to be semantically simple or primitive.<sup>58</sup>

<sup>54</sup> As already noted, Aquinas develops his views about modes in connection with his views about analogy, which in turn are bound up with his distinctive understanding of the function of the copula. For relevant texts and discussion, see Klima 1996 and Wippel 2000.

<sup>55</sup> See Spencer 2012 for an overview.

<sup>56</sup> See especially McDaniel 2010a and 2010b.

<sup>57</sup> My summary relies on (without exactly corresponding to) McDaniel's various discussions of ontological pluralism in McDaniel 2009a, 2010a, 2010b, and 2011. See also Turner 2010 and 2012.

<sup>58</sup> McDaniel's formulation borrows the notion of a semantically primitive restricted quantifier from Hirsch 2005.

The third step is to allow that the notion of fundamentality can be applied to languages. This assumption seems plausible. If *God* and *created substance* are types of being that occupy a special place in our ontology, in virtue of carving reality at its joints, we would expect the predicates corresponding to these types—‘God’ and ‘created substance’—to occupy a similar place in our language, in virtue of marking the relevant joints. But, then, just as *God* and *created substances* can be fundamental types of being (or at least more fundamental types than *substance*), so too it would seem, ‘God’ and ‘created substance’ can be fundamental predicates (or at least more fundamental predicates than ‘substance’). And the same point extends to any aspect of language that can be said to mark the ultimate structure of reality, including quantifier expressions.<sup>59</sup>

The fourth and final step is to explain modes of being in terms of quantifiers that are both semantically primitive and more fundamental than the unrestricted quantifier.<sup>60</sup> Indeed, on the neo-Aristotelian formulation, ontological pluralism just is the view that there are such restricted quantifiers (or could and should be, if our actual language lacks them). Thus, just as everything that falls within the domain of the unrestricted quantifier can be said to exist or have being, so too everything that falls within the relevant sort of restricted quantifier can be said to exist in some way or to have a distinctive mode of being.

McDaniel’s neo-Aristotelian formulation of ontological pluralism seems to me to provide an extremely useful model for thinking about Aquinas’s complete ontology.<sup>61</sup> There are at least three reasons for this. First, and perhaps most obviously, this formulation gives us a way of making precise Aquinas’s talk of both modes and the analogy of being. Indeed, as McDaniel himself points out, both can be understood in terms of fundamental quantifiers. Thus, the claim that God and creatures have different modes of being, and hence can be spoken of only analogically, can be understood as the claim that God and creatures fall under distinct quantifiers (say, ‘ $\exists x_G$ ’ and ‘ $\exists x_C$ ’), both of which are semantically primitive and more fundamental than the unrestricted quantifier.<sup>62</sup>

Second, and perhaps less obviously, McDaniel’s neo-Aristotelian formulation provides a helpful framework for addressing certain metaphysical questions raised by Aquinas’s doctrine of the analogy of being—in particular, the question whether the modes in terms of which this doctrine is to be understood are beings or entities distinct from their possessors. According to the neo-Aristotelian formulation, something possesses a mode of being if and only if it falls under a certain sort of quantifier.

<sup>59</sup> McDaniel’s formulation builds on Sider 2009, which argues persuasively for the view that expressions besides predicates (including quantifiers) can be fundamental.

<sup>60</sup> McDaniel 2010b contrasts this formulation of ontological pluralism with a more minimal one according to which modes of being are explained in terms of quantifiers that are both semantically primitive and *no less fundamental than* the unrestricted quantifier.

<sup>61</sup> See McDaniel forthcoming for some interesting reflections on what it is to provide a philosophical model and its importance for doing the history of philosophy.

<sup>62</sup> See especially McDaniel 2010a, 693–4.

But we can still ask whether its falling under such a quantifier is to be explained in terms of any further beings or entities (say, properties, propositional functions, or beings of some *sui generis* type). If so, then it appears that modes will be distinct from their possessors and something must be said about their precise nature. But if not, then we can simply insist that modes do not add anything to one's ontology over and above their possessors; they are merely derivative beings. This latter possibility turns out to be especially important for understanding Aquinas's ontology. For as McDaniel himself notes, God's mode of being cannot be conceived of as distinct from God himself.<sup>63</sup> Things are trickier in the case of created modes of being. I myself side with those commentators who think of all modes, whether created or divine, as merely derivative beings for Aquinas, and hence as nothing over and above their possessors.<sup>64</sup> But the important point is that the neo-Aristotelian formulation enables us to make sense of a range of interpretations. Indeed, in terms of the framework it provides, we can simply ask, with respect to any quantifier that marks off a fundamental mode or analogous type of being, whether it corresponds to any beings or entities distinct from those falling under it (and if so, of what type).

Third and finally, McDaniel's neo-Aristotelian formulation sheds considerable light on Aquinas's views about the ultimate categories of being. This is perhaps most obvious in the case of the number of such categories. For as McDaniel himself notes, insofar as God's mode of being is distinct from the modes associated with the ten Aristotelian categories, Aquinas appears to be committed to at least eleven ultimate categories of being.<sup>65</sup> McDaniel doesn't mention any further distinctive modes or categories of being associated with Aquinas's hylomorphism—in particular, *prime matter*, *substantial form*, or *accidental unity*. But the same points obviously extend to them. Indeed, on my interpretation, we can think of Aquinas's complete ontology in terms of fourteen fundamental types of quantifier—one corresponding to each of the most fundamental modes listed in Fig. 2.3.<sup>66</sup>

Although this is not, perhaps, as obvious, McDaniel's neo-Aristotelian formulation also sheds light on an aspect of Aquinas's views about the categories that has

<sup>63</sup> See McDaniel 2011, n. 29: "God in fact enjoys being identical with His mode of being." See §8.3.

<sup>64</sup> See, e.g., Pasnau 2011, §12.3, which introduces the notion of an "ontologically innocent structure" as a way of defending this interpretation.

<sup>65</sup> See again McDaniel 2011, n. 29:

On Aquinas's view, there is a being, God, who does not belong to any of the ten categories recognized by Aristotle. But also on Aquinas's view, God enjoys a mode of being that is distinct from the mode of being of any entity within the ten categories . . . As it were, God is the sole member of the ontological category to which He belongs.

<sup>66</sup> Again, I don't mean to suggest that Aquinas himself is thinking in these terms. Nor do I mean to suggest that this is the only way to do justice to his views. There are a number of different ways of developing ontological pluralism, and some of these may be even closer to Aquinas's own way of thinking (say, one that invokes a homonymous existence predicate rather than multiple quantifiers). I have, however, chosen to rely on McDaniel's formulation because it provides a way of doing justice to Aquinas's views that is particularly easy for contemporary philosophers to enter into sympathetically.



often puzzled commentators—namely, his willingness to allow for the identification of members of distinct categories. McDaniel does not explicitly remark on this aspect of Aquinas's views, but he does note that such cross-categorical identification is not unusual among Aristotelians, since Aristotle himself seems to have explicitly allowed for it. McDaniel specifically mentions Aristotle's suggestion in *Categories* 8 that some qualities might be relations.<sup>67</sup> But perhaps an even more important example, at least from the perspective of Aquinas, is Aristotle's suggestion in *Physics* 3.3 that actions and passions can always be identified with a single motion. For Aquinas is explicit at various places in his writing that he takes the categories of *action* and *passion* to include the very same beings.<sup>68</sup>

Commentators have often wondered what it could mean to say that a single being belongs to distinct ontological categories. McDaniel's neo-Aristotelian formulation helps us to see the answer: it just means that a single being can possess distinct modes, and hence fall under distinct fundamental quantifiers. This way of thinking about cross-categorical identification fits well with Aquinas's own discussion of action and passion. Indeed, he explicitly describes them as distinct modes of a single accidental form or property. Thus, insofar as this form or property *inheres in* or *is received by* a substance (i.e., a patient), Aquinas says that it belongs to the category of passion. Insofar as this same form or property *comes from* or *is produced by* a distinct substance (i.e., an agent), it belongs to the category of action. Finally, insofar as this form or property is considered as capable of possessing both of these two modes of being, it can be described as a *motion*.<sup>69</sup>

Aquinas explicitly raises the issue of cross-categorical identification only in the case of the nine Aristotelian categories of accident. Perhaps this is because he thinks that it is only in their case that we can have a single being possessing more than one mode of being.<sup>70</sup> In any case, it is important to note that there is considerable debate in the secondary literature about Aquinas's understanding of the relationship between the

<sup>67</sup> See McDaniel 2011, 6.

<sup>68</sup> See §9.3 for texts and discussion.

<sup>69</sup> Again, see §9.3.

<sup>70</sup> Interestingly, however, Aquinas's discussion of the Christian doctrine of the Trinity would suggest otherwise. Thus, in *ST* 1.28.3, he says that the relationship between the divine Persons—in particular, the Father and the Son—can be understood on analogy with that holding between action and passion. Thus, just as action and passion are distinct from each other, but identical to the same motion, so too the Father and the Son are distinct from each other, but identical to the same (simple) divine substance. This analogy suggests that we think of divine Fatherhood and Sonship as distinct modes of a single being—namely, God. And since divine Fatherhood and Sonship are not accidental to God, it suggests that even in the case of non-accidental modes, Aquinas may allow for a single being to possess more than one. This analogy is, I think, extremely interesting and important, and deserves more attention than I can give it in this context. Here, however, it is worth noting at least three things. First, this analogy appears to provide a new model for understanding the Trinity, one that is distinct from any of those on offer in the contemporary literature in philosophy of religion. Second, unlike other models currently on offer, the one suggested by this analogy seems perfectly consistent with the view that God is absolutely simple (since presumably even an absolutely simple being could, in principle, possess distinct modes in the sense of falling under distinct fundamental quantifiers). Third and finally, further reflection on the place of this analogy in Aquinas's thought may force us to introduce some further categories of being for him—namely, the fundamental modes associated with the divine Persons—*Father*, *Son*, and *Holy Spirit*.

members of these nine Aristotelian categories. Most commentators would, I think, agree that the members of *quality* and *quantity* are completely disjoint, both from each other and from the members of *action* and *passion*. That is to say, there is general agreement that qualities, quantities, and motions form three distinct classes of accidental form. Beyond this, however, there is little agreement. My own view is that all nine of Aquinas's accidental categories can ultimately be understood in terms of the members of these three classes—that is, in terms of nine distinct modes of being somehow distributed across the members of these classes. Once again, however, the important point is that if we help ourselves to McDaniel's neo-Aristotelian formulation, we can make sense of a range of different interpretations.

For all these reasons, Aquinas's complete ontology can, I think, be usefully approached from the perspective of recent work on ontological pluralism. In saying this, I don't mean to suggest that Aquinas himself would have formulated his own views in precisely these terms. On the contrary, such a suggestion would be hopelessly anachronistic. My only point is that such work, and in particular McDaniel's neo-Aristotelian formulation of ontological pluralism, provides us with a *model* for appreciating much of what is philosophically significant about Aquinas's ontology, as well as a *framework* for discussing some of the most important dialectical or interpretive options that it leaves open.

Here again there is much more that could be said about Aquinas's views, and much more that will be said in the chapters that follow. But the foregoing does, I hope, suffice to fill out the sketch of Aquinas's ontology with which we began, as well as to prepare the way for the discussion to follow.

## PART II

# Change

### 3

## Change in General

Aquinas's ontology of the material world cannot be understood apart from his views about change andhylomorphism. In Parts II–III (Chs 3–7), therefore, I examine his views on each of these topics. In this part (Chs 3–4), I focus on change and in particular on the two texts containing Aquinas's most extended developments of his views on this topic—namely, his *De principiis naturae*, an early systematic work on the four causes (dating from his days as a Masters Student at Paris, 1252–1256, or perhaps slightly earlier); and the first book of his *Sententia super Physicam*, a commentary on Aristotle's *Physics*, written near the end of his life (dating in particular from his second Paris Regency, 1268–1272).<sup>1</sup>

At the heart of Aquinas's theory of change are the broadly Aristotelian notions of generation and corruption. Indeed, Aquinas often speaks as if all change (whether substantial or accidental) involves the generation of one thing and the corruption of another (whether the things in question are substances or compounds of substance and accident). For the same reason, when he wants to describe change in the broadest possible sense (*motus, mutatio*), he often does so in terms of these two notions (*generatio et corruptio*). Eventually, we shall see that this way of speaking is misleading (Ch. 11). For Aquinas thinks that there are certain types of change that do not involve generation and corruption—most notably, *transubstantiation* or the type of change involved in the Eucharist.<sup>2</sup> For the time being, however, we can safely ignore such complications.

Like Aristotle, Aquinas often uses the terms 'generation' and 'corruption' in a narrow sense to apply only to substantial (as opposed to accidental) change. But even

<sup>1</sup> For the dating of Aquinas's works and details about his life, I follow Torrell 1993 (but see also Weisheipl 1983). Doubts are sometimes raised about the legitimacy of using Aquinas's Aristotelian commentaries as a source for his own philosophical views. In the present context such doubts seem misguided, as these two texts (despite their separation in time) contain no doctrinal differences on the issues I shall be discussing, and in fact appear to be mutually illuminating. Even so, in order to strengthen my argument, I shall focus wherever possible on the *De principiis*, since here, at least, there can be no doubt that Aquinas is speaking *in propria voce*. For helpful discussion of the relationship between Aquinas's Aristotelian commentaries and his other works, see Jenkins 1996. For an account of the specific relationship between Aquinas's *Physics* commentary and his *De principiis*, see Wippel 2000, esp. xix–xx and ch. 9.

<sup>2</sup> See §11.1 for discussion of Aquinas's views about transubstantiation. See also §§11.2–3 and §13.6 for some further types of change that do not strictly involve generation and corruption.

when he does so, he sees a close connection between the broader and narrower senses of these terms. Thus, as he says in *De principiis* 1:

In an unqualified sense (*simpliciter*), generation and corruption are found only in the category of substance. But in a qualified sense (*secundum quid*), they are found in the other categories as well. (DPN 1.58–61)<sup>3</sup>

Moreover, when Aquinas goes on to clarify what he has in mind by generation and corruption (in either the broad or narrow sense), he habitually appeals to a host of other Aristotelian notions—including not only matter (*materia*) and form (*forma*), but also potentiality (*potentia*), actuality (*actus*), and privation (*privatio*). Thus, in the text immediately following that just quoted, he says:

Since *generation* is a kind of change (*mutatio*) from non-being to being (and, conversely, *corruption* is a kind of change from being to non-being), generation begins not just from any kind of non-being, but rather from the kind which is a being in *potentiality*—as, for example, when a statue is generated from a lump of bronze (*ex cupro*), which is a statue in potentiality, but not in *actuality*. In general, therefore, three things are required for generation: a being in potentiality, which is *matter*; a non-being in actuality, which is *privation*; and that by which the matter is actualized, namely, *form*. (DPN 1.62–71)

Obviously if we want to understand Aquinas's theory of change, we must get clear about the technical terms in which he frames it. In this chapter, I focus on Aquinas's understanding of change in general, and hence of generation and corruption in the broad sense—that is, the sense in which they can be applied to both substantial and accidental changes. In the next chapter (Ch. 4), I turn to Aquinas's understanding of generation and corruption in the narrower sense—that is, the sense in which it applies to substantial (as opposed to accidental) changes. In each case, moreover, my procedure will be the same—to consider how the relevant technical terms function in Aquinas's own examples of change, thereby letting their meanings emerge from their original context.

### 3.1 Change as Generation and Corruption

Let us begin, therefore, with the notions of generation and corruption—and with Aquinas's example of a statue generated from a lump of bronze. In order to fill out the example, moreover, let us suppose that the lump of bronze starts off being spherical and then, at some later point, gets melted down and recast in the form of the Greek goddess, Athena. In that case, we can say that our example involves both the generation of a statue and the corruption of a sphere.

<sup>3</sup> For Aquinas's discussion of how these different senses of generation and corruption connect with Aristotle's texts, see *In Phys.* 3.2 and *In Meta.* 1.12.

As this simple example makes clear, generation and corruption involve the *coming to be* of one thing as well as the *passing away* of another. Indeed, this is the point of Aquinas's saying that generation involves a "kind of change from non-being to being", and likewise that corruption involves a "kind of change from being to non-being".

Initially, it might seem odd for Aquinas to suggest that every change involves the coming to be of one thing and the passing away of another. After all, don't some changes involve mere rearrangement? We can begin to appreciate what Aquinas has in mind if we take his notions of coming to be and passing away broadly enough to include the *coming to obtain* and *ceasing to obtain* of states of affairs. So understood, every change *would* seem to involve both the "coming to be" of one thing—namely, a state of affairs that previously did *not* obtain—as well as the "passing away" of another—namely, a distinct state of affairs that previously *did* obtain.<sup>4</sup> As this way of putting things helps to emphasize, moreover, Aquinas sees change as essentially involving some reference to time.<sup>5</sup> Thus, the states of affairs that "come to be" in any given change will exist at some time later than those that "pass away"—even if the change itself occurs instantaneously.

Commentators sometimes speak as if generation and corruption, for Aquinas, could be straightforwardly identified with coming to be and passing away, respectively. Indeed, they sometimes use the English terms 'coming to be' and 'passing away' as straightforward translations of the Latin terms *generatio* and *corruptio*. But this is misleading, insofar as it suggests that Aquinas would allow for change to occur regardless of how the relevant states of affairs come to be or pass away. To see what is wrong with this suggestion, suppose that the sphere in our example passed away simply because, at some point in time, God decided to annihilate it, whereas the statue subsequently came into being simply because, at some later point in time, God decided to create it *ex nihilo*. Or, what is equivalent for our purposes, suppose that our sphere merely "popped" out of existence at one time and our statue merely "popped" into existence at a later time. In either case, we would have a situation which, for the sake of future reference, we can represent schematically as indicated at Fig. 3.1 (using a circle to stand for our sphere, a square to stand for our statue, and a dotted arrow to represent the direction of time).

In each of the two cases represented by this diagram, we have distinct states of affairs coming to be and passing away—indeed, the very same states of affairs

<sup>4</sup> No doubt those philosophers who conceive of states of affairs as necessarily existing abstracta will object to speaking of them as "coming to be" or "passing away" (hence the scare quotes around these phrases here and in the text). For the time being, however, such philosophers are welcome mentally to substitute 'coming to obtain' and 'ceasing to obtain' as appropriate—though, as we shall see, Aquinas himself conceives of the termini of change along the lines of concrete states of affairs (or facts) which are contingently existing objects that can literally come into being and pass out of existence. See Ch. 4 (esp. §4.3).

<sup>5</sup> Or at least to the temporal relations of *earlier than* and *later than*. In speaking of "times" here (and in what follows), I don't mean to be taking a stand on Aquinas's views about the nature of time.

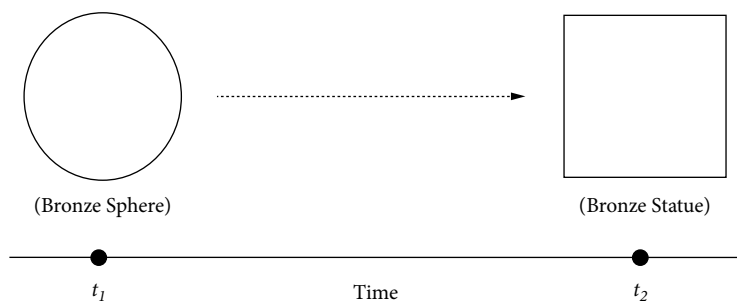


Figure 3.1 Mere Coming-to-Be and Passing-Away: Temporal Succession

involved in our original example (namely, the coming to be of our statue and the passing away of our sphere). Even so, Aquinas would say, neither of these cases involves any change (or generation and corruption). This is because, in keeping with common sense, he thinks of change as requiring the existence of *something* that is changed. As he says at one point in his commentary on Aristotle's *Metaphysics*:

In every change (*mutatione*) there *must* be a subject common to the termini of change. (*In Meta.* 8.1.1688)

In a particularly telling passage of the *Summa Theologiae*, he goes even further, explaining that the existence of such a subject is part of the very "concept of change" (*de ratione mutationis*):

It is part of the very concept of change that one and the same being is different now from the way it was before. In some cases, the being that is different now from the way it was before is *the same being in actuality*—as in cases of change with respect to quantity, quality, and place. In other cases, however, this being is only *the same being in potentiality*—as in cases of substantial change, where the subject [of change] is [prime]<sup>6</sup> matter. By contrast, in the case of creation, where the entire substance of things is produced [*ex nihilo*], it cannot be said that we have one and the same being that is different now from the way it was before—except according to a certain way of thinking. (*ST* 1.45.2 ad 2; see also *QDP* 3.2 and *In Phys.* 1.11–13)

As this passage makes clear, Aquinas thinks that, in addition to temporal succession, change requires there to be something that exists throughout the various times presupposed by the succession—a subject that remains numerically one and the same being throughout and hence may be described as *enduring* the change.<sup>7</sup>

<sup>6</sup> The need for this interpolation, as well as the reason for Aquinas's tendency to leave it off, will become clearer in Chapter 4, when we turn to the distinction between substantial and accidental change (see esp. §4.2).

<sup>7</sup> I use the language of 'endurance' to emphasize that Aquinas's account of change commits him to the rejection of mere perdurance—that is, the view that things change by having a temporal part (rather than being wholly present) at each of the times they exist. I highlight the significance of this aspect of Aquinas's view in §7.4, where I argue that Aquinas's account of change provides us with a novel (and attractive) solution to what is perhaps *the* contemporary problem of change—namely, the problem of temporary intrinsics.

Aquinas explicitly introduces this requirement to distinguish instances of change from instances of creation.<sup>8</sup> But it should be clear that the same requirement also serves to distinguish instances of change from instances of mere “popping” into or out of existence as well.<sup>9</sup> Finally, given what Aquinas says about this requirement being built into the concept of change, we can assume for now that he takes it for granted in discussions of change more generally.<sup>10</sup>

In light of the foregoing, we can see that when Aquinas speaks of change in terms of generation and corruption, he doesn't have in mind just any sort of “coming to be” or “passing away”. On the contrary, he has in mind very specific types of each—namely, those in which one thing “comes to be *from*” or “passes away *into*” another. Thus, if we want to represent the change involved in the statue example as Aquinas himself understands it, we must introduce some further complexity into the states of affairs that serve as its termini, so as to indicate not only that they involve distinct elements (and hence are distinct), but also that they share a common constituent (and hence overlap). Since Aquinas describes this change in terms of the same bronze having different shapes at different times, we can represent his understanding of the statue example as indicated in the diagram at Fig. 3.2.

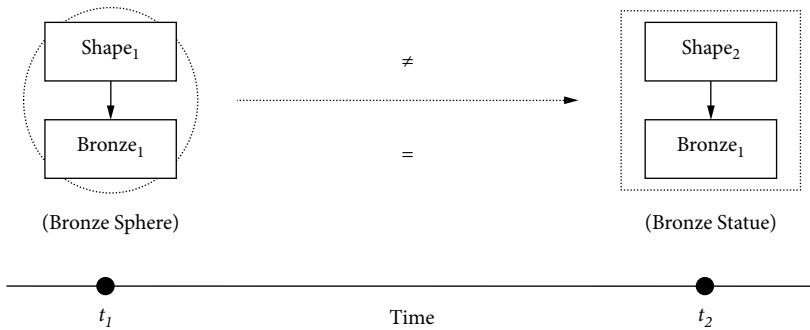


Figure 3.2 Genuine Change: Temporal Succession *Plus* Endurance

<sup>8</sup> See §11.1 for some complications regarding Aquinas's understanding of creation.

<sup>9</sup> Aquinas would, in fact, deny that anything could merely “pop” into or out of existence, on the grounds that this would require the possibility of something's coming to be or passing away *uncaused*. Such a denial calls our attention to another aspect of Aquinas's theory of change—namely, his view that every change involves an agent or efficient cause (see esp. *DPN* 3). Although a complete account of Aquinas's theory of change would have to address this issue, I shall ignore it here. Indeed, since I'm concerned only with the relationship between Aquinas's theory of change and his hylomorphism, I will restrict my attention to his account of just two of the four Aristotelian “causes”—namely, matter and form—leaving his account of the other two—namely, agent and end—to one side. For some helpful discussion of the latter two causes, as well as their connection to contemporary debates about causation, see Freddoso 2002 and Rota 2012.

<sup>10</sup> Though we shall have to revisit this assumption again in §11.1. For a very different understanding of Aquinas's theory of change, one that we'll have occasion to revisit in §5.5, see Pasnau 2002, 131–40.



As we might expect, Aquinas takes the analysis of this particular example of change to be generalizable, and hence to apply to other cases of change as well.<sup>11</sup>

### 3.2 Matter, Form, and Change

We now have the basic elements of Aquinas's general account of change before us: change is to be analyzed in terms of generation and corruption, where this is to be understood in terms of the temporal succession of distinct states of affairs that overlap, and hence share a common constituent that endures the change itself.

Now as it turns out, it is a very short step from this general account of change to the basic structure of Aquinas's hylomorphism—that is, the doctrine that for some range of objects, those objects are compounds of both matter and form (or *hyle* and *morphe* in Aristotle's Greek). As the passages quoted earlier suggest, Aquinas introduces the term 'matter' (*materia*) for that which remains the same throughout a change—that is, for the enduring subject of change (in our example, the lump of bronze). By contrast, he introduces the term 'form' (*forma*) for that with respect to which the matter or enduring subject is changed—that is, for what does not endure or remain the same throughout the change (in our example, the different shapes possessed by the lump). Finally, he introduces the term 'compound of matter and form' (*ex materia et forma composita*) for that which exists in virtue of some matter possessing a form, and hence for what serves as the termini of change (in our example, the sphere and statue). In short, we can see that Aquinas just analyzes change in general in terms of the generation and corruption of hylomorphic compounds.<sup>12</sup>

It follows from all of this that Aquinas is, at least in a broad sense, a realist about matter, form, and hylomorphic compounds. Beings of all three types are required, he thinks, to explain the occurrence of any given change, and yet their relations to one another are such as to require their distinction. Thus, insofar as the matter of any particular change can exist without the forms or compounds with respect to which it changes, it is clear that such matter is distinct from both. But it also seems clear that hylomorphic compounds are distinct from both matter and form, taken either individually or jointly. For strictly speaking, it is only compounds (not matter and form) that can be generated and corrupted. Indeed, in *De principiis* 2, Aquinas insists that to deny this claim would lead directly to an infinite regress:

Every generation proceeds *from* something *to* something. Now, matter is that *from which* generation proceeds, whereas form is that *to which* it proceeds. Thus, if matter or form were

<sup>11</sup> But see Chs 4–5 for discussion of the different types of subject involved in different types of change, and hence for Aquinas's understanding of the distinction between the two different types of cases mentioned in *ST* 1.45.2 ad 2, quoted in the text—namely, those involving *the same being in actuality* vs. those that involve only *the same being in potentiality*.

<sup>12</sup> *DPN* 1–2; *In Phys.* 1.12.

generated, then matter would have to have matter and form would have to have form—and so on *in infinitum*. Strictly speaking, therefore, only compounds are generated [or corrupted]. (DPN 2.92–96)<sup>13</sup>

Such considerations help to explain why Aquinas is prepared to say, in general, that “a compound is not identical to the beings from which it is composed” (*In Meta.* 7.17.1674). In any case, it should be clear that, insofar as matter, form, and compound can be characterized in distinct and incompatible ways, they must be regarded as distinct from one another.

In order to bring out the sort of realism implicit in Aquinas's general account of change, we can state the account itself as follows:

### Change in General

A change *C* occurs if and only if

- (i) There is some portion of matter, *M*, which endures from some time  $t_1$  to some later time  $t_2$ ;
- (ii) There are some forms, *F-ness* and *G-ness*;
- (iii) *M* has *F-ness* at  $t_1$  (thereby composing a hylomorphic compound, *HMC*<sub>1</sub>, which is *F* at  $t_1$ ) and *M* has *G-ness* at  $t_2$  (thereby composing a distinct hylomorphic compound, *HMC*<sub>2</sub>, which is *G* at  $t_2$ ).

In what follows, I consider in some detail the implications of this account for Aquinas's understanding of the nature of matter, form, and compound. Before doing so, however, I need to make two clarifications regarding the account itself.

First of all, in spite of its name, questions can be raised about the generality of this account. I have already alluded to the fact that Aquinas allows for certain changes that do not strictly conform to it (in particular, transubstantiation). But even ignoring such special cases, there are examples of changes that seem to fall outside its scope. Consider, for example, the passage of time. That appears to be a type of change. But can it be explained in purely hylomorphic terms? If so, what serves as the matter and form in its case? Again, consider a body that is moving along in space and then suddenly accelerates (say, by falling into orbit around a planet). Or consider two planets that draw closer to each other as a result of gravitational attraction. Can these sorts of case be fully explained in terms of some matter taking on distinct forms?

<sup>13</sup> This is not to deny that matter or form can be said to come into being. On the contrary, Aquinas thinks that both can and do come into being through creation—though even here he prefers to speak of them not as *created* but as *co-created* (*concreari*) with the compounds of which they are a part. See, e.g., QDP 3.1 ad 12. In the case of forms, moreover, he thinks that they can be educed (*educi*) or brought into being via a natural process that actualizes the potentiality for which they are the corresponding actuality. See, e.g., QDP 3.4 ad 7. Insofar as forms come into being (or pass away) with the compounds of which they are a part, Aquinas will allow for a sense in which they are generated (or corrupted)—namely, *per accidens*. See, e.g., ST 1.75.6.

Finally, consider cases of extrinsic (or so-called Cambridge) change—as when someone goes from being the tallest person in the room to being the shortest. What are we to say about them?

In order to avoid being distracted by these sorts of questions, I shall hereafter assume that the account just given is best thought of as a general account not of all change, but rather of changes of a specific type—namely, ordinary *intrinsic* changes. Ultimately, I think Aquinas does want to explain most other natural (as opposed to supernatural) changes in terms of these.<sup>14</sup> But whether I'm right about this is not something we need to decide here. For our purposes, it will be enough to see that Aquinas's general account applies to many ordinary intrinsic changes. For these are the changes that determine the basic structure of his hylomorphism.

But even if we restrict our understanding of Aquinas's general account in this way, there is still a respect in which his account appears to fall short of complete generality. This brings us to a second clarification.

As I've presented Aquinas's account so far, it applies only to the simplest sorts of intrinsic changes—those involving the generation of *one* thing (say, a single statue) from the corruption of *one* other thing (say, a single sphere). As Aquinas himself recognizes, however, in addition to such *one-one* changes, there are also *one-many* and *many-one* changes. Aquinas's own examples of such changes usually involve substances or living things. Thus, as an example of a one-many change, he mentions certain worms that can be cut in half to form two new living things;<sup>15</sup> and as an example of a many-one change, he mentions the generation of a human being from sperm and menstrual blood.<sup>16</sup> But presumably he would also allow for the possibility of artificial changes of both types. Our original sphere, for example, could have been melted down and recast not as a single statue, but as several smaller statues (in which case we would have a one-many change involving artifacts). And, of course, these several smaller statues could in turn be melted down and recast as a single sphere of the same shape and size as our original one (in which case we would have a many-one change involving artifacts).

Now as it turns out, it is fairly easy to reconstruct Aquinas's account of such changes based on what we know of his account of one-one changes. In fact, such a reconstruction requires us to do just three things: (i) introduce more matter (or better, more portions of matter), (ii) introduce more forms, and (iii) allow that the matter of one object can be divided or compounded with that of another to produce yet further portions of matter.<sup>17</sup> Thus, if we want to state Aquinas's account of

<sup>14</sup> But see §11.2 for an important exception.

<sup>15</sup> See, e.g., *In Meta.* 7.16.

<sup>16</sup> See, e.g., *DPN* 1. I shall return to this example in §4.1, since it is Aquinas's favorite example of substantial change. See also §11.2 for discussion of a special type of many-one change.

<sup>17</sup> In what follows, I use expressions of the form ' $x + y$ ' to refer to the portion of matter that results from compounding distinct portions of matter,  $x$  and  $y$ . I will have more to say about the compounding (and dividing) of matter in Ch. 5. (See especially §5.4, where I argue that Aquinas's views on this score commit him to arbitrary sums or fusions of prime matter.)

changes involving the generation of many things (say, many statues) from a single thing (say, a single sphere), we can do so as follows:

### One-Many Change in General

A one-many change  $C_{O-M}$  occurs if and only if

- (i) There are some portions of matter,  $M_1, M_2, \dots M_n$ , which both (a) endure from some time  $t_1$  to some later time  $t_2$ , and (b) are such that  $M_1 = M_2 + \dots M_n$ ;
- (ii) There are some forms,  $F\text{-}ness_1, F\text{-}ness_2, \dots F\text{-}ness_n$ ;
- (iii)  $M_1$  has  $F\text{-}ness_1$  at  $t_1$  (thereby composing a hylomorphic compound,  $HMC_1$ , which is  $F_1$  at  $t_1$ ) and  $M_2$  has  $F\text{-}ness_2 \dots M_n$  has  $F\text{-}ness_n$  at  $t_2$  (thereby composing distinct hylomorphic compounds,  $HMC_2 \dots HMC_n$ , which are  $F_2 \dots F_n$  respectively at  $t_2$ ).

Again, if we want to state Aquinas's account of changes involving the generation of a single thing (say, a single sphere) from many others (say, many statues), we can do so as follows:

### Many-One Change in General

A many-one change  $C_{M-O}$  occurs if and only if

- (i) There are some portions of matter,  $M_1, M_2, \dots M_n$ , which both (a) endure from some time  $t_1$  to some later time  $t_2$ , and (b) are such that  $M_n = M_1 + \dots M_{n-1}$ ;
- (ii) There are some forms,  $F\text{-}ness_1, F\text{-}ness_2, \dots F\text{-}ness_n$ ;
- (iii)  $M_1$  has  $F\text{-}ness_1 \dots M_{n-1}$  has  $F\text{-}ness_{n-1}$  at  $t_1$  (thereby composing distinct hylomorphic compounds,  $HMC_1 \dots HMC_{n-1}$ , which are  $F_1 \dots F_{n-1}$  respectively at  $t_1$ ) and  $M_n$  has  $F\text{-}ness_n$  at  $t_2$  (thereby composing another hylomorphic compound,  $HMC_n$ , which is  $F_n$  at  $t_2$ ).

Obviously, to provide Aquinas's complete account of ordinary intrinsic change, we would need to extend our original statement of his account so as to include both one-many and many-one changes.<sup>18</sup> In other contexts, it might be useful to provide such an extension, but here it would merely introduce unnecessary complications. For apart from drawing attention to the assumption that matter can be compounded and

<sup>18</sup> What about many-many changes? Presumably these could all be explained in terms of changes of the other types (one-one, one-many, and many-one), and so would not represent a genuinely distinct type of change.

divided (an important assumption that we shall have to return to in §5.4), such an extension would add nothing to the hylomorphic picture that emerges from Aquinas's account of the simplest sorts of intrinsic changes. In order to avoid unnecessary distraction, therefore, I shall once again simply restrict my understanding of Aquinas's general account so that it applies only to my original statement of it:

#### **Change in General**

A change *C* occurs if and only if

- (i) There is some portion of matter, *M*, which endures from some time  $t_1$  to some later time  $t_2$ ;
- (ii) There are some forms, *F-ness* and *G-ness*;
- (iii) *M* has *F-ness* at  $t_1$  (thereby composing a hylomorphic compound, *HMC*<sub>1</sub>, which is *F* at  $t_1$ ) and *M* has *G-ness* at  $t_2$  (thereby composing a distinct hylomorphic compound, *HMC*<sub>2</sub>, which is *G* at  $t_2$ ).

For convenience, I shall continue to speak of this account as if it were a perfectly general one. This way of speaking, however, should always be taken as shorthand for the more cumbersome (but also more accurate) description of it as a 'general account of ordinary one-one intrinsic change'.

With these clarifications in mind, let us return to our question about the implications of Aquinas's general account of change for the nature of matter, form, and hylomorphic compounds.

### **3.3 Functional Hylomorphism**

When Aquinas speaks of matter, form, and compound in the context of change in general, it is natural to suppose that he has in mind beings of distinct ontological types or categories—namely, *concrete individuals*, *properties*, and *states of affairs*, respectively. Thus, the matter in our original statue example is a lump of bronze, which he regards as a concrete individual (indeed, as a concrete individual *substance*); the forms in this same example are different shapes, which he regards as contingent properties or accidents of the lump; and the hylomorphic compounds that serve as the termini for change are beings that exist precisely because (and just so long as) the lump possesses the different shapes, and hence can be thought of along the lines of states of affairs.<sup>19</sup>

It needs to be emphasized, however, that there is nothing in Aquinas's general account of change that requires attributing to him such a substantive conception of matter, form, and compound. On the contrary, as the aforementioned statement of

<sup>19</sup> See again *DPN* 1–2.

this account suggests, these notions are to be understood, at least in the first place, *functionally* rather than *categorially*—that is to say, in terms of certain metaphysical functions or roles rather than specific ontological types or categories. Strictly speaking, matter need not be conceived of as a concrete individual or substance but only as a being capable of playing what we might call the ‘matter role’—that is, the role of accounting for the sameness involved in change. Again, forms need not be conceived of as properties, but only as beings capable of playing what we might call the ‘form role’—that is, the role of accounting for the difference involved in change. This is also true for hylomorphic compounds. Of course, one could try to insist that only concrete individuals, properties, and states of affairs are capable of playing these roles. Strictly speaking, however, this would be to introduce assumptions that go beyond the hylomorphic framework implied by Aquinas’s general account of change.

In order to bring out the functional nature of Aquinas’s hylomorphism, as implied by his general account of change, we can define its central notions correlatively as follows:

#### Functional Hylomorphism

- *Matter* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time, and hence serve as the substratum for change.
- *Form* =<sub>def</sub> A being (whatever it is in itself) that can be had or lost by matter over time, and hence account for that with respect to which the matter is changed.
- *Compound* =<sub>def</sub> A being (whatever it is in itself) that exists in virtue of some matter possessing a form, and hence can serve as one of the termini of change.

The functional nature of Aquinas’s hylomorphism is important for understanding his full-blown metaphysical views. This is especially true when it comes to the special case of the human soul—which Aquinas takes to be a form but not a property (§11.4). But it is also true when it comes to understanding certain claims that would otherwise seem unintelligible—such as the claim that wholly immaterial beings can have matter (§8.2) or the claim that even forms or properties can be the matter for certain compounds (§11.3).

As it turns out, the functional nature of Aquinas’s hylomorphism is also important for interpreting two of the other technical notions that he habitually appeals to in his discussions of change—namely, potentiality and actuality. Indeed, as becomes clear early on in *De principiis*, these two notions simply provide us with an alternative way of describing the functional roles that Aquinas associates with matter and form.

Everything which is in potentiality can be called ‘matter’. So too, everything through which a thing has [some type of] being [or actuality], whether substantial or accidental, can be called ‘form’. Thus, a human being that is potentially white becomes actually white through whiteness. Again, sperm [and menstrual blood],<sup>20</sup> which is potentially human, becomes actually human through the soul. Moreover, it is because form accounts for [some type of] *actual* being that it is called ‘an actuality’. (DPN 1.36–43)

In this passage, Aquinas connects the notions of potentiality and actuality directly with matter and form. Moreover, he does so precisely to give us a way of focusing on the distinctive roles associated with each. ‘Matter’, as we’ve seen, is Aquinas’s term for a being with the capacity to take on distinct forms over time. But insofar as a being has this capacity, he now tells us, it is *in potentiality* in some respect—namely, in respect of the distinct forms it is capable of taking on (or in respect of the hylomorphic compounds it is thereby capable of entering into). Aquinas illustrates the point here with one of his other favorite examples of change—the generation of something white. Insofar as a human being, such as Socrates, is capable of taking on the form of whiteness, he is *in potentiality* to being white. Aquinas thinks that the same point can also be illustrated with a further example, involving the generation of a human being from sperm and menstrual blood. But since this example involves complications best treated in connection with his views about substantial change, I shall hold off discussing it until the next chapter.

The relationship between matter and potentiality is mirrored, Aquinas thinks, by that between form and actuality. ‘Form’, as we’ve seen, is his term for something with the capacity to be received by matter. But insofar as a being has this capacity, he now tells us, it is capable of *actualizing* the potentiality of matter in some respect, and thus of making it *actually* exist in a way it previously did not (namely, as part of a new hylomorphic compound). Thus, when a human being takes on the form of whiteness, it comes to be *actually* white. In fact, Aquinas says, it is because form accounts for the way a thing *actually* is that we can refer to it as ‘an actuality’ (*actus*).

At first blush, it might seem odd that Aquinas refers to form as ‘an actuality’ rather than as ‘a being in actuality’. Indeed, given the correlative nature of matter and form, and the fact that he refers to matter as ‘a being in potentiality’ (*ens in potentia*), we might have expected such a parallel construction here. The asymmetry becomes intelligible, however, once we recall that there are really three notions whose correlativeity must be accounted for—matter, form, *and* hylomorphic compound:

There is a difference between matter and form: matter is a being in potentiality, whereas form is an *entelechy*—that is, an actuality—by which matter is actualized. For the same reason, the compound itself is the being in actuality. (*In DA* 2.1.113–17)

<sup>20</sup> I have supplied ‘and menstrual blood’ here because this phrase is presupposed by what Aquinas says earlier in the passage: “One sort of thing is in potentiality with respect to *being human* (for example, sperm and menstrual blood).” I shall return to this passage in §4.1.

As Aquinas tells us here, it is hylomorphic compounds, not forms, that qualify as *beings in actuality*. For it is only when such compounds exist (say, when a human being possesses whiteness) that we get something that is in actuality in some respect (say, *actually* white). In light of this, the asymmetry noted previously makes perfect sense. Just as we use the term 'whiteness' to refer to that which makes something to be in a specific respect (namely, to be white), so too, Aquinas thinks, we can use the term 'actuality' to refer to that which makes something to be in some specific respect or other. Note, moreover, that although Aquinas speaks of matter being "actualized" by form, strictly speaking it is the compound, not the matter, that the form makes to be actual in some respect. Indeed, the form's actualization of some matter just appears to consist in its making the matter to be part of a compound that is actual in some respect.

Since the precise connections between Aquinas's functional hylomorphism and his understanding of potentiality and actuality will become important later on—in particular, when we turn to his views about prime matter (§§5.4–5)—let us set out these connections explicitly here as follows:

**Functional Hylomorphism, Potentiality, and Actuality**

- *Matter* =<sub>def</sub> A being in potentiality.
- *Form* =<sub>def</sub> An actuality.
- *Compound* =<sub>def</sub> A being in actuality.

We have now touched on all the notions crucial for understanding Aquinas's general account of change except one—privation. Because this notion raises some special complications, however, it requires separate treatment.

### 3.4 A Puzzle about Privation

Up to this point I have been speaking as if Aquinas's analysis of change in general relies on just two fundamental principles or notions—matter and form—with the notion of a hylomorphic compound being definable in terms of both of them. This might appear to conflict with certain further features of Aquinas's general account of change. For, when he is being most careful, he almost always says that change is to be understood in terms of *three* fundamental principles or notions, which are just the ones that Aristotle lists in *Physics* 1—namely, matter, form, *and* privation. Consider, for example, the following passage, which provides a sort of canonical statement of Aquinas's views about the "principles of things that come to be according to nature" or "principles of nature" for short:



There are three principles of nature—namely, matter, form, and privation. One of these (namely, form) is that towards which generation is directed; the other two fall on the side of that from which generation proceeds. (DPN 2.1–4; see also *In Phys.* 1.13)

Again, note that when Aquinas illustrates the sort of change involved in his statue example, he explicitly makes reference to all three of these principles:

Thus, when a statue is made out of some bronze, the bronze which is capable of taking on the form of a statue is the *matter*; the lack of shape or arrangement [in virtue of which something is called a statue] is the *privation*; and the shape [or arrangement] in virtue of which something is called a statue is the *form*. (DPN 1.71–75)

If passages like these were all we had to go on, it might appear that (contrary to what I've been suggesting), Aquinas's general account of change must be explained not only by reference to matter and form, but also by reference to a further, peculiar type of being—an *absence* or *privation*. Fortunately, such passages are not all we have to go on. In fact, when we read them in light of what we've already seen of Aquinas's general account, it becomes clear that there is no real conflict after all.

To begin, note that each of the passages just quoted concerns itself with only a single aspect of Aquinas's views about change—his views about generation (as opposed to corruption). Conceptually speaking, it is surely true that we can't explain generation without reference to privation, and hence to a kind of "change from non-being to being". Thus, in order to explain how a statue is generated from a lump of bronze, we must speak of a lump's coming to acquire some shape that it previously *lacked*. Even so, this explanation does not imply anything about what the privation in question consists in *ontologically*, much less require us to think of it as a being of some peculiar type. On the contrary, when we combine this explanation with another aspect of Aquinas's views about change—namely, that every change involves both generation *and* corruption—we would seem to have good reason to suppose that privations always consist in the possession by matter of some other form, and hence that matter and form are the only two *ontological* principles of change after all, as our earlier statement of the general account of change suggests.

In order to see this, let us return once again to our statue example. As we have seen, when the lump in this example acquires a new shape, the result is not only the generation of a statue, but also the corruption of something else—namely, a sphere. But, then, just as we must appeal to the lump's *lacking* a certain shape (i.e., the privation of a positive form) to explain how it becomes a statue, so too we must appeal to its *having* a certain shape (i.e., the presence of another positive form) to explain how it ceases to be a sphere. Given the connection between these two states of affairs, however, it is natural to assume that Aquinas would regard the lump's lack of the one form to consist in that same lump's possession of the other. And likewise for all other such cases.

This assumption about the nature of privation appears to be confirmed by some further remarks Aquinas makes. Privation, he says, must be regarded as a “principle of change” or “coming to be” (*principium in fieri*). And in this respect, it is just like matter and form. But in another respect, he says, privation is unlike matter and form. For it cannot be regarded as a “principle of being” (*principium in esse*):

Now [privation] differs from the other principles insofar as the latter are principles both of being and of coming to be. Thus, in order to generate a statue, there must *be* some bronze, and eventually there must also *be* the shape of the statue. Again, once the statue exists, both of these must *exist* as well. Privation, by contrast, is a principle of coming to be, but not a principle of being. (DPN 2.39–44)

The contrast Aquinas draws here strongly suggests that, of his three principles, only matter and form are to be included in the metaphysical make-up or structure of changeable objects. What is more, he goes on to suggest that privation can, in fact, always be accounted for ontologically in terms of some combination of matter and form:

Matter is never without some privation; insofar as it possesses one form, it lacks another, and vice versa. (DPN 2.20–22)

Evidently, the point here is that whenever matter lacks one form, *F-ness*, this is to be accounted for in terms of its possession of some other form, *G-ness*. And since matter always possesses some form, it will also lack some other.<sup>21</sup>

In light of all this, it should be clear that there is no genuine conflict between Aquinas's appeal to privation and our earlier statement of his general account of change. Even so, these reflections do clarify an aspect of his views not made explicit by our earlier statement—namely, that the forms involved in any given change must stand in a very special relationship. Indeed, as we can now see, such forms must be conceived of as *contrary* or as *incompatible* in the sense that the possession of the one by matter is sufficient to exclude the possession of the other. This, I take it, is the real point of Aquinas's appeal to privation.<sup>22</sup> And in order to do justice to this point, we need only slightly modify the second clause of our earlier statement of the general account as follows (with the modification indicated by italics):

<sup>21</sup> See also Aquinas's remarks about privation in *DEE* 1 and *In Phys.* 1.13 and 15, as well as Haldane 2007, who takes the former as evidence that Aquinas's views about privations resemble David Lewis's views about absences:

Absences are not events. They are not *anything*: where an absence is, there is nothing relevant there at all. Absences are bogus entities. Yet the proposition that an absence occurs is not bogus. It is a perfectly good negative existential proposition. (Lewis 2000, 195–6)

<sup>22</sup> This is even clearer, I think, in the context of Aquinas's *Physics* commentary, where he often follows Aristotle in speaking of change in terms of *contraries* rather than forms. See *In Phys.* 1.10 and 13.

**Change in General—Revised Account**

A change *C* occurs if and only if

- (i) There is some portion of matter, *M*, which endures from some time  $t_1$  to some later time  $t_2$ ;
- (ii) There are some *contrary* or *incompatible* forms, *F-ness* and *G-ness*;
- (iii) *M* has *F-ness* at  $t_1$  (thereby composing a hylomorphic compound, *HMC*<sub>1</sub>, which is *F* at  $t_1$ ) and *M* has *G-ness* at  $t_2$  (thereby composing a distinct hylomorphic compound, *HMC*<sub>2</sub>, which is *G* at  $t_2$ ).

Hereafter, whenever I refer to Aquinas's general account of change, it will always be this more precise statement of it that I have in mind.

### 3.5 Inherence and Composition

There is one final aspect of Aquinas's general account of change that I want to touch on briefly before concluding this chapter. We have seen that this account makes essential reference to matter, form, and hylomorphic compound. But it is important to see that it also makes essential reference to two different relations. On the one hand, there is the relation that distinct forms successively bear to the matter that takes them on in a given change. Aquinas refers to this relation as 'inherence' (*inhaerentia*).<sup>23</sup> On the other hand, there is the relation that both matter and form jointly bear to the hylomorphic compounds of which they are a part. Aquinas refers to this relation as 'composition' (*compositio*).<sup>24</sup> What is more, as our statement of Aquinas's general account of change makes clear, he takes these two relations to be intimately connected: some matter *M* and some form *F-ness* compose a hylomorphic compound *HMC* (at some time  $t_1$ ) if and only if *F-ness* inheres in *M* (at  $t_1$ ).

Just as it is natural to think of forms as *properties*, so it is also natural to think of inherence as a type of *property possession*. Moreover, because Aquinas speaks of hylomorphic compounds as *composed of* matter and form, it is natural to think of matter and form as literal *parts* or *constituents* of compounds, and hence of compounds as literally possessing a type of mereological structure. But here again, it needs to be emphasized that there is nothing in Aquinas's general account of change that requires attributing to him such a substantive conception of these relations. On the contrary, just as matter, form, and compound are to be understood (at least in the first instance) in purely functional terms, the same is true of inherence and composition. Strictly speaking, inherence need not be conceived of in terms of any type of property possession, but only as a relation (whatever it is in itself) that plays what we

<sup>23</sup> See, e.g., *ST* 1.75.2 ad 2.

<sup>24</sup> See, e.g., *ST* 1.85.5 ad 3.

might call the 'inherence role'—that is, the role of appropriately uniting the matter and form of a given change. Likewise, composition need not be conceived of in terms of literal parthood or constituency, but only as a relation (whatever it is in itself) that plays what we might call the 'composition role'—that is, the role of appropriately uniting the termini of a given change with some corresponding matter and form. In the case of inherence, the appropriate unity will involve matter and form being brought together in a way that enables them to play their sameness- and difference-making roles in change. In the case of composition, the appropriate unity will involve some objects being brought together with matter and form in a way that explains their dependency on the latter.<sup>25</sup>

Admittedly, insofar as inherence is a relation that distinct forms bear to matter (at a time), it will have to be understood as a one-one relation, whereas insofar as composition is a relation that both matter and form bear to distinct hylomorphic compounds (at a time), it will have to be understood as a many-one relation. Apart from this, however, there appear to be no other substantive requirements placed on the nature of these relations by Aquinas's general account of change.<sup>26</sup>

No doubt, there is more that could be said about Aquinas's general account of change. But we have already seen enough to appreciate the basic structure of the hylomorphism to which it gives rise. In order to fill out this basic structure further, as well as to get clearer about how the relations of inherence and composition in particular are to be understood, we must look at Aquinas's specific account of the distinction between substantial and accidental change. This is the topic of Chapter 4.

<sup>25</sup> Even though abstract states of affairs—such as *Socrates's being white*—are typically conceived of as simple beings, it is not unusual for philosophers to speak of them as if they were "composed" of certain "constituents"—say, Socrates and whiteness—insofar as their existence entails the latter. See, e.g., Plantinga 1974. In such cases, we might say, the relevant entailments or necessary connections play the composition role, establishing a sort of "logical dependency" between their relata.

As it happens, there is a debate in the secondary literature on Aristotle concerning the proper interpretation of his hylomorphic compounds, and in particular whether they should be regarded as literally composed of matter and form. See Loux 2005 for details. Aquinas's functional approach to hylomorphism helps to make sense of this debate, precisely because it leaves open this sort of interpretive question. For Aquinas's own substantive conception of the relation between compounds and their matter and form, see §4.3 and §8.1.

<sup>26</sup> Here again the functional nature of Aquinas's hylomorphism will be important for understanding his full-blown metaphysical views, especially with regard to the human soul—which he takes to be not only a form but also something inhering in matter, despite its not being a property. See §§11.4–5, §12.3, and §12.5.

## 4

# Substantial vs. Accidental Change

In Chapter 3, I presented Aquinas's general account of change as generation and corruption and explored its hylomorphic implications. In this chapter, I fill out Aquinas's views about change and hylomorphism by examining his specific account of the two main subtypes or categories in terms of which all generation and corruption are to be understood—namely, substantial and accidental change.

As we have seen, Aquinas's general account of change captures two intuitions associated with our pre-theoretical understanding of the world: first, that change involves a subject that endures the change (i.e., some matter or substratum); and second, that change involves something with respect to which this enduring subject is changed (i.e., some forms or properties). As will become clear shortly, his specific account of change captures some further intuitions about the types of change that occur in the world—namely, that some of these changes involve pre-existing substances, whereas others involve the generation and corruption of substances themselves.

Despite the intuitive basis of Aquinas's specific account of change, it raises some serious difficulties or puzzles. Although Aquinas does not explicitly deal with these puzzles in the specific form that I shall present them, it is not hard to reconstruct his solutions to them. Moreover, these reconstructions are worth considering because they serve to highlight two of the most important aspects of his hylomorphism: first, that hylomorphic compounds are best understood as substratum-property complexes (i.e., as concrete rather than abstract states of affairs);<sup>1</sup> and second, that distinct hylomorphic compounds can be one and the same material object, and hence bear to one another a form of numerical sameness that falls short of identity.<sup>2</sup>

<sup>1</sup> See §§11.4–5 and §§12.4–5 for some complications raised by the special case of human beings for this conception of hylomorphic compounds.

<sup>2</sup> Given the close connection between numerical sameness and counting, it will often be convenient to speak of the relation of numerical sameness as one whose relata are to be counted as one (regardless of whether they are also identical). So as to forestall misunderstanding, however, I should emphasize that the appeal to counting here is in no sense pragmatic. On the contrary, I assume throughout that things are *to be counted as one* only if they are *one*.

## 4.1 Two Types of Change

In discussing Aquinas's general account of change in Chapter 3, we focused on a single example—that in which a statue is generated from a spherical lump of bronze—though we also had occasion briefly to discuss one other example—that in which a human being comes to be white. Although Aquinas thinks that both examples can be used to illustrate the nature of change in general, he also thinks we must be careful not to focus exclusively on them. Otherwise, we might be led (as I think contemporary philosophers often are) to associate a feature distinctive of one specific type of change with the nature of change in general.<sup>3</sup>

Let us consider, therefore, a third example that Aquinas habitually appeals to in the context of change—namely, one involving the generation of a human being from sperm and menstrual blood (or, as we now know better, sperm and ovum). Like other examples of change, Aquinas conceives of this one in terms of matter successively taking on distinct and incompatible forms, and thereby entering into distinct hylo-morphic compounds.<sup>4</sup> Even so, he recognizes that this example is importantly different from the previous two. For this example involves the generation of a *substance*—that is, a concrete individual falling under some natural kind (in this case, *human being*). By contrast, neither of the previous examples involved the generation of any substances. On the contrary, they both presupposed the existence of a single substance throughout (namely, a lump of bronze or a human being) which merely changes with respect to one of its contingent properties or accidents (namely, shape or color). For obvious reasons, Aquinas refers to the type of change involved in the generation of a human being as 'substantial change' (*generatio simpliciter vel motus ad formam substantialem*), whereas he refers to that involved in the other two examples as 'accidental change' (*generatio secundum quid vel motus ad formam accidentalem*).<sup>5</sup>

In order to account for the intuitive difference between substantial and accidental change, Aquinas appeals to the different ways in which matter functions in each. Speaking once again of matter in terms of potentiality, he says:

Something can be in potentiality with respect to two kinds of being [namely, substantial and accidental being]. One sort of thing is in potentiality with respect to *being human* (for example,

<sup>3</sup> See §7.5 for a defense of the claim that contemporary discussions tend to focus on only one type of intrinsic change—namely, what Aquinas calls 'accidental change'.

<sup>4</sup> Strictly speaking, this example involves what I referred to in §3.2 as a 'many-one change', so we should speak of the combined matter of the sperm and menstrual blood (or ovum) taking on a new form. But since nothing turns on this point, I shall ignore it for the time being. See §11.2 for further discussion.

<sup>5</sup> See again the passages from *DPN* 1 cited at the beginning of Ch. 3. See also the following passage, in which Aquinas makes it clear that his distinction between substantial and accidental change corresponds to that which he draws between generation in the narrow and broad senses:

Because generation is a motion to form, there are two types of generation corresponding to the two types of form. Generation in an unqualified sense corresponds to substantial form, and generation in a qualified sense corresponds to accidental form. (*DPN* 1.47–50)

sperm and menstrual blood), whereas another sort of thing is in potentiality with respect to *being white* (for example, a human being). Now both that which is in potentiality with respect to substantial being and that which is in potentiality with respect to accidental being can be called ‘matter’ (as sperm [and menstrual blood] is called ‘the matter of a human being’ and a human being is called ‘the matter of a white thing’). But they differ in this: the matter that is in potentiality with respect to substantial being is called the ‘matter *from* which’ [something comes to be], whereas the matter that is in potentiality with respect to accidental being is called the ‘matter *in* which’ [something comes to be]. (DPN 1.9–19)

Here Aquinas signals the difference between substantial and accidental change by calling attention to a difference in the specific way that matter functions in each. In substantial change, it functions as “matter from which” something comes to be (*materia ex qua*), whereas in accidental change, it functions as “matter in which” something comes to be (*materia in qua*). What these differences come to can best be seen from Aquinas’s own examples.

Consider first Aquinas’s example of substantial change—the generation of a human being. Like any other example of change, this one involves some matter—that is, something that endures the change by taking on a form or property it previously lacked (in this case, we can call the relevant form or property ‘humanity’).<sup>6</sup> Even so, Aquinas thinks, it makes no sense to speak of the matter in this case as becoming human. As he explains elsewhere:

When a human comes to be, we can truly say not only that it previously was not human, but also that it previously was not (full stop). (*In Phys.* 1.12.10)

Every case of generation involves matter “from which” something comes to be. And the generation of a human being is no exception in this regard. Even so, Aquinas tells us here, when a human being comes to be, we cannot speak of its matter—or indeed of anything else that previously existed—as coming to be *human*. And the reason for this is straightforward. Whatever is human, he thinks, is human essentially. Evidently, therefore, if something is human at any time of its existence, it must be human at all times of its existence.<sup>7</sup> For the same reason, the matter that exists prior to the generation of a human being cannot be that “in which” the human being comes to be. Since nothing can go from being non-human to human or vice versa, such matter must be *merely* that “from which” the human comes to be. And, of

<sup>6</sup> I use the term ‘humanity’ to refer to the substantial form of a human being for two reasons: first, because it serves to highlight the parallel between our human and statue examples; and second, because Aquinas says that this is the form that locates human beings within their specific natural kind (e.g., DEE 2). It should be noted, however, that Aquinas himself often reserves the term ‘humanity’ (*humanitas*) for the natural kind or essence itself (e.g., DEE 3), which as we’ll eventually see (§5.3) includes not only substantial form but also common (prime) matter. See §1.3 for the distinction between individual and common matter.

<sup>7</sup> Aquinas’s views about the Incarnation of Christ, according to which God himself becomes human, introduces a complication for this understanding of what it means for a form or property to be essential. See Ch. 13 (esp. §§13.3–4 and §13.6). For our purposes here, however, we can ignore such complications.

course, the point applies not just to the generation of human beings, but to substantial change more generally.

We can express the point that Aquinas is making here a bit more clearly if we draw a distinction between property possession and property characterization. Every change involves some matter that *possesses* different forms or properties at different times. Even so, Aquinas wants to say, the matter for substantial change is not *characterized by* the forms or properties it possesses at these different times—where the notion of characterization can be expressed at least partially as follows:<sup>8</sup>

### Property Characterization

If a subject *a* is characterized by a property *F*-ness, then *a* is *F*.

Of course, all of this raises an obvious question: What exactly is the matter for a substantial change? That is to say, what sort of matter can possess a form (such as humanity) without being characterized by it? The answer, as we'll see shortly, is *prime matter*.<sup>9</sup>

Aquinas's commitment to distinguishing property possession from property characterization raises a serious difficulty for his account of substantial change. We will return to this difficulty in §4.3. But first let us continue with Aquinas's own development of the contrast between the different sorts of matter involved in substantial and accidental change. For there are a number of important hylomorphic implications that follow from it.

As we have seen, in the case of a substantial change by which a human being is generated, it makes no sense to speak of the matter as coming to be characterized by the form or property it takes on. To repeat, humanity is not a type of form or property that can characterize its subject accidentally or contingently. Notice, however, that there is no such obstacle to speaking in this way in the case of an accidental change by which a human being comes to be white. Unlike humanity, whiteness is a type of form that can characterize its subject contingently. Indeed, in the case of such

<sup>8</sup> See §§6.3–5 for a more complete expression of the relationship between predication, property possession, and characterization. As will become clear in this context, not all characterization involves properties.

<sup>9</sup> Aquinas sometimes speaks as if prime matter were capable of being characterized by the forms it takes on. Thus, in the passage just quoted from *DPN* 1, he speaks of prime matter as “in potentiality with respect to *being human*”. As Aquinas explains elsewhere, however, this way of speaking must be regarded as elliptical for “prime matter is in potentiality with respect to taking on the form of humanity, and hence with respect to *being part of something human*”:

For just as it is true that ‘a human is white’ but not true that ‘a human is whiteness’ or ‘humanity is whiteness’, so, too, it is true that ‘this enmattered thing (*materiatum*) is human’ but not true that ‘matter is human’ or ‘matter is humanity’. (*In Meta.* 7.2.1289)

There is also the question as to *why* prime matter cannot be characterized by the forms it takes on. This is a difficult question, one to which I shall return in §5.5. The short answer, I argue there, has to do with the *non-individuality* of prime matter. See also the discussion in §§6.4–5.



an accidental change, we would appear to have no choice but to claim that the matter or subject of such a change comes to be characterized by the forms it successively takes on. For, evidently, to speak of the generation of a white human being, say in the particular case of Socrates, just is to speak of Socrates himself coming to be white. And likewise for other such changes. It is, I think, precisely for this reason that Aquinas contrasts the matter of a substantial change with that of an accidental change by saying that the former is merely that “from which” something comes to be, whereas the latter is that “in which” something comes to be.

As the foregoing helps to make clear, Aquinas thinks there are two different ways of specifying the functional role associated with matter in the context of change. Insofar as every change involves an enduring subject, it will involve something playing what we can think of as the generic matter role. But insofar as a given change is substantial or accidental, its matter will also play one of two more specific functional roles, depending on whether or not it can be characterized by the new forms it takes on. If it *cannot* be so characterized, it will function as what we might call a ‘mere subject of endurance’, whereas if it *can* be so characterized, it will function as what we might call a ‘subject of characterization’. For the sake of clarity, let us set out these notions and their relationship to one another more precisely as follows:

#### **Kinds of Subject (or Matter) for Change**

- *Subject of Endurance* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time, and hence can serve as a substratum for change.
  - *Mere Subject of Endurance* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time but cannot be characterized by them (= the substratum for substantial change).
  - *Subject of Characterization* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time and can be characterized by them (= the substratum for accidental change).

As it turns out, these definitions not only clarify the different types of subject involved in substantial and accidental change, but also provide us with all we need to make precise Aquinas’s understanding of the different types of change themselves, as well as their relationship to his account of change in general. Thus, drawing on these definitions, we can express Aquinas’s understanding of accidental change, in which matter functions not only as a subject of endurance, but also as a subject of characterization, by simply adding a fourth condition to our earlier statement of his account of change in general:

### Accidental Change

An accidental change  $C_A$  occurs if and only if

- (i) There is some portion of matter,  $M$ , which endures from some time  $t_1$  to some later time  $t_2$ ;
- (ii) There are some contrary or incompatible forms,  $F$ -ness and  $G$ -ness;
- (iii)  $M$  has  $F$ -ness at  $t_1$  (thereby composing a hylomorphic compound,  $HMC_1$ , which is  $F$  at  $t_1$ ) and  $M$  has  $G$ -ness at  $t_2$  (thereby composing a distinct hylomorphic compound,  $HMC_2$ , which is  $G$  at  $t_2$ );
- (iv)  $M$  goes from *being*  $F$  at  $t_1$  to *being*  $G$  at  $t_2$ .

The first three conditions guarantee that the matter involved in accidental change functions as a subject of endurance, whereas the fourth condition guarantees that it also functions as a subject of characterization.<sup>10</sup>

As for substantial change, it is just like accidental change, except that it fails the final “subject of characterization” condition. Hence, we can express Aquinas’s understanding of it by saying that it satisfies his general account but is not accidental (and so involves matter functioning as a mere subject of endurance):

### Account of Substantial Change

A substantial change  $C_s$  occurs if and only if

- (i) There is some portion of matter,  $M$ , which endures from some time  $t_1$  to some later time  $t_2$ ;
- (ii) There are some contrary or incompatible forms,  $F$ -ness and  $G$ -ness;
- (iii)  $M$  has  $F$ -ness at  $t_1$  (thereby composing a hylomorphic compound,  $HMC_1$ , which is  $F$  at  $t_1$ ) and  $M$  has  $G$ -ness at  $t_2$  (thereby composing a distinct hylomorphic compound,  $HMC_2$ , which is  $G$  at  $t_2$ );
- (iv\*)  $M$  does not go from *being*  $F$  at  $t_1$  to *being*  $G$  at  $t_2$ .

As the statement of these two definitions is intended to show, Aquinas takes the distinction between substantial and accidental change to provide an exclusive and exhaustive division of the possible types of generation and corruption. That is to say, he thinks every case of generation and corruption belongs to one of these two types, but none belongs to more than one. Taken together, therefore, substantial and

<sup>10</sup> The addition of such a fourth condition might seem puzzling, since it is natural to think that  $M$ ’s having  $F$ -ness is sufficient by itself to guarantee that  $M$  functions as a subject of characterization. I shall return to this puzzle in §4.3. For now, however, I shall simply assume that Aquinas has a coherent way of drawing the distinction between  $M$ ’s having  $F$ -ness and  $M$ ’s being  $F$ .

accidental change provide us with the two main subtypes or categories in terms of which change in general is to be understood.<sup>11</sup>

## 4.2 Functional Hylomorphism Revisited

Now as Aquinas recognizes, his specific account of substantial and accidental change has important implications for his hylomorphism. Indeed, as he sees it, this account requires us to distinguish two different types of matter, form, and compound. Thus, immediately after distinguishing the two specific roles that matter can play in change (namely, “that from which” vs. “that in which” something comes to be), he goes on to say:

Properly speaking, that which is in potentiality with respect to substantial being is called ‘prime matter’, whereas that which is in potentiality with respect to accidental being is called ‘a subject’. (DPN 1.20–24)

Prime matter, Aquinas tells us here, is what plays the role of matter in substantial change—that is to say, it is the matter that endures the generation (or corruption) of substances and, hence, functions as “that from which” they come to be (or pass away). As its name suggests, moreover, prime matter is taken by Aquinas to be matter in the *primary* or *proper* sense of the term. For the same reason, he often refers to prime matter simply as ‘matter’.<sup>12</sup>

Unlike matter in the primary or proper sense, Aquinas thinks that what plays the role of matter in accidental change—that is, the matter that functions as “that in which” something comes to be—is something that qualifies as matter only in a secondary or derivative sense. Indeed, we have just seen that he refers to the matter of an accidental change simply as the ‘subject’ of such a change. We shall see later that Aquinas has good reason for wanting to avoid the use of ‘matter’ in this context.<sup>13</sup> For now, however, let us simply note what he says about the use of ‘subject’ here:

It is significant that what is in potentiality with respect to accidental being is called ‘a subject’, for we say that an accident [i.e., an accidental form] is in a subject, whereas we do not say of a substantial form that it is in a subject [but in matter] . . . although we sometimes use one term in place of the other—that is, ‘matter’ for ‘subject’ and vice versa. (DPN 1.24–35)

As this passage makes clear, when Aquinas uses the term ‘subject’ to refer to the matter of an accidental change, he has in mind the specific way in which matter

<sup>11</sup> But again, see Chs 11 and 13 (esp. §§11.1–2 and §13.6) for complications.

<sup>12</sup> See, e.g., *ST* 1.45.2 ad 2 (quoted in §3.1), where Aquinas says that “in cases of substantial change . . . the subject is matter”. As we’ll see shortly, Aquinas thinks that part of what accounts for the primacy of prime matter is the fact that (unlike other matter) it is not itself composed of any further matter and form.

<sup>13</sup> See §8.2, where I discuss Aquinas’s claim that even an immaterial substance can qualify as a subject, and hence as “matter” in the secondary or derivative sense. See also §11.3 for further complications associated with Aquinas’s use of the term ‘subject’.

functions in accidental change—namely, as a *subject of characterization*. No doubt Aquinas expects this sense of ‘subject’ to be the one uppermost in the minds of his readers, given their familiarity with Aristotle’s *Categories*. For in this work, Aristotle famously describes accidents as “in a subject” (1a25), where it is clear that accidents characterize the subjects in which they inhere.

As Aquinas immediately goes on to point out, however, he also recognizes a broader sense of ‘subject’ according to which “we sometimes use... ‘matter’ for ‘subject’ and vice versa”. When he uses the term ‘subject’ in this broad sense, he has in mind the generic way in which matter functions in change—namely, as a *subject of endurance*. To avoid complications arising from Aquinas’s different notions of subject, I shall hereafter use the terms ‘prime matter’ and ‘secondary matter’ to refer to the beings or entities that play the specific functional roles associated with matter.

In addition to distinguishing two different types of matter (or subjects) for change, Aquinas also draws a parallel distinction between two different types of form corresponding to them. Thus, in the passage just quoted, he introduces the term ‘substantial form’ (*forma substantialis*) to refer to the type of form possessed by prime matter (or mere subjects of endurance), and hence involved in substantial change. And he introduces the term ‘accidental form’ (*forma accidentalis*) or ‘accident’ (*accidens*) to refer to the type of form possessed by secondary matter (or subjects of characterization), and hence involved in accidental change.

Finally, as Aquinas tells us elsewhere, the distinction between these two types of matter and form brings with it a further distinction—that between two different types of hylomorphic compound. On the one hand, there is the type of compound that exists in virtue of some prime matter possessing a substantial form—what he calls a ‘material substance’ (*substantia materialis*) or ‘composite substance’ (*substantia composita*). On the other hand, there is the type of compound that exists in virtue of some secondary matter possessing some accident—what he calls an ‘accidental unity’ (*unum per accidens*) or ‘accidental being’ (*ens per accidens*) or sometimes simply ‘accident’ (*accidens*).<sup>14</sup>

In short, Aquinas’s specific account of change leads him to further specify the sort of functional hylomorphism introduced by his general account. For the sake of completeness, we can set out these further specifications more precisely as follows:

### Two Types of Matter

- *Prime Matter* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time but cannot be characterized by them.
- *Secondary Matter* =<sub>def</sub> A being (whatever it is in itself) that can have different forms over time and can be characterized by them.

<sup>14</sup> For a list of references to the various ways that Aquinas refers to compounds of substances and accidents, see Brown 2005, 64, n. 27.

**Two Types of Form**

- *Substantial Form* =<sub>def</sub> A being (whatever it is in itself) that can be had or lost by prime matter over time.
- *Accidental Form* =<sub>def</sub> A being (whatever it is in itself) that can be had or lost by secondary matter over time.

**Two Types of Compound**

- *Material Substance* =<sub>def</sub> A being (whatever it is in itself) that exists in virtue of some prime matter possessing a substantial form.
- *Accidental Unity* =<sub>def</sub> A being (whatever it is in itself) that exists in virtue of some secondary matter possessing an accidental form.

In Chapter 3 (§3.2) we saw that Aquinas's general account of change has some important realist implications—namely, that change in general is to be explained by appeal to matter, form, and compound (where these are understood as three distinct types of being). As we can now see, something similar is true of Aquinas's specific account of change. Indeed, according to the latter account, specific types of change are to be explained by appeal to specific types of matter, form, and compound (again, understood as distinct types of being). Thus, substantial change is to be explained by appeal to *prime matter*, *substantial forms*, and *material substances*, whereas accidental change is to be explained by appeal to *secondary matter*, *accidental forms*, and *accidental unities*.

It seems to me that Aquinas's commentators have not always appreciated the force of these realist implications, especially when it comes to his views about prime matter and accidental unities. It is important to emphasize, therefore, that just as Aquinas's realism about matter (or enduring substrata) is an immediate consequence of his general account of change, so too his realism about prime matter (or enduring substrata for substantial change) is an immediate consequence of his specific account of change. Again, just as his realism about hylomorphic compounds (including his commitment to postulating distinct compounds to serve as the termini for every change) is an immediate consequence of his general account of change, so too his realism about accidental unities (including his commitment to postulating distinct accidental unities to serve as the termini for every accidental change) is an immediate consequence of his specific account of change.<sup>15</sup>

<sup>15</sup> It is, perhaps, worth emphasizing that Aquinas's views about change do not automatically commit him to an infinite number of hylomorphic compounds, much less to an infinite number of accidental unities. On the contrary, they commit him to distinguishing only as many such compounds or unities as there are distinct forms or properties possessed by their matter or substratum. For evidence that the number of such forms or properties is limited, see the discussion in §§6.3–4 and §9.3. See also the discussion in §2.4.

As the definitions just given are intended to show, the different types of matter, form, and compound associated with Aquinas's specific account of change are to be understood in primarily functional (rather than categorical) terms. In this respect, these definitions are like those required by his general account of change (§3.3). That is to say, they pick out their referents via certain metaphysical roles or functions played in change. Although these definitions leave open the possibility of more than one type of being playing the roles associated with different types of matter, form, and compound, Aquinas thinks that the roles themselves place some significant ontological constraints on the types of being that can play them. This is perhaps clearest in the case of his two specific types of matter—namely, primary and secondary matter.

Consider first the case of secondary matter. According to the aforementioned definition, anything capable of undergoing accidental change, and hence taking on an accidental form or property, can qualify as matter in this sense. Following Aristotle, however, Aquinas repeatedly insists that only substances are capable of possessing accidents, and hence of undergoing changes of the type in question.<sup>16</sup> The precise reason for Aquinas's insistence in this regard is not altogether clear, though it is no doubt connected with the correlativity of the notions of substance and accident. In any case, it clearly follows from such insistence that substances are the only type of being that can play the role associated with secondary matter—and this is, of course, a significant ontological constraint.<sup>17</sup>

What about prime matter? To clarify the ontological constraints on what can play the relevant role here requires a bit more development. To begin, note that Aquinas sometimes speaks *as if* the role of prime matter, like that of secondary matter, could be played by substances. Indeed, in the early parts of the *De principiis*, he speaks as if sperm and menstrual blood (both substances, on his view) not only *can* function as prime matter in the generation of human beings, but actually *do* so function.<sup>18</sup> But this way of speaking is misleading. For, as we have seen, prime matter is supposed to be that which endures the generation and corruption of substances.<sup>19</sup> But neither sperm nor menstrual blood endures the generation of a human; on the contrary, they

<sup>16</sup> See, e.g., *In Sent.* 1.23.1.1; *ST* 1.77.7 ad 2; and *QDP* 9.1.

<sup>17</sup> Eventually, we shall see that Aquinas is prepared to relax this constraint in the context of the Eucharist (§11.3). Indeed, in this particular context it becomes clear that Aquinas's repeated insistence that only substances (but not accidents) are capable of possessing accidents must be understood with the implicit qualification 'apart from divine intervention'.

<sup>18</sup> See again *DPN* 1.9–19, quoted at the outset of §4.1.

<sup>19</sup> See also the following remarks from Aquinas's commentary on the *Metaphysics*:

Since there is substantial change—namely, [unqualified] generation and corruption—there must be a common subject underlying the contrary motions involved in [such] generation and corruption. What is more, this subject underlies the terms [of the change], form and privation, in such a way that sometimes it is in actuality by virtue of the form, whereas other times it is the subject of the privation of that form. (*In Meta.* 8.1.1688)

are both corrupted in the course of such a change. Clearly, then, sperm and menstrual blood are not functioning as prime matter in the generation of a substance.

But if that is true, why does Aquinas speak in such a misleading way? The answer, it turns out, has to do with limitations of ordinary language. To see this, note first what Aquinas says about the way in which we ordinarily refer to the matter of a given change:

Sometimes we refer to matter together with a privation, but other times we refer to matter without privation. For example, when we use 'bronze' for the matter of a statue, this does not imply privation: for when I call something 'bronze', no lack of shape or arrangement is understood. By contrast, 'flour' does imply the privation of the form of bread: for when I call something 'flour', this brings to mind the sort of shapelessness or lack of arrangement required by the form of bread. Now, what endures (*permanet*) the process of generation is the matter or subject, not the privation or even what is composed of matter and privation. The matter that endures, therefore, does not imply privation, whereas matter that implies privation is [merely] transient. (DPN 2.57–69)

As Aquinas tells us here, some of the terms we use to refer to matter are bound up with the notion of privation (or lack of a specific form). This is true of 'flour', used to refer to the matter involved in the generation of some bread, and it would also appear to be true of 'sperm and menstrual blood', used to refer to the matter involved in the generation of some human being. In each case, Aquinas seems to think that the terms in question succeed in referring to matter that is capable of enduring the change, but only insofar as that matter lacks the form that serves as the terminus for the change. Thus, the meaning of 'flour' excludes the possession of the form of bread, and the meaning of 'sperm and menstrual blood' excludes the possession of the form of humanity.

What is interesting about these two cases, and indeed about the case of substantial change generally, is that we lack terms for picking out the relevant matter *without* recourse to privative expressions. Unlike the case of 'bronze', we have no way in ordinary language to refer either to the matter that endures the generation of bread or to the matter that endures the generation of a human being. Thus, if we want to single out such matter for discussion, we must begin by using expressions in ordinary language privatively and then attempt to clarify our meaning from there. At some point, of course, it will be useful to introduce a new term into our language (or stipulate a new use of an old term) that refers to such matter non-privatively. This, in effect, is what Aquinas does with the term 'prime matter'. Indeed, as he goes on to point out, in the text immediately following the passage just quoted, once we have such a term in hand we can begin to appreciate what a special nature this matter must have:

It must be known that some matter—for example, bronze—is composed of [matter and] form. For even though bronze is matter in respect of a statue, it is itself composed of matter and form. Now because bronze has matter [and form], it is not called 'prime matter'. On the contrary, only that matter which is understood without any form or privation, or rather underlies all

forms and privations, is called 'prime matter'. For only it has no other matter [and form] before it. And such matter is also called *hyle*. (DPN 2.70–78)

As Aquinas suggests here, if we want to refer to the sort of matter involved in substantial change non-privatively, we can do so by introducing the technical term 'prime matter' (or by stipulating a technical use of the Greek term *hyle*). It is clear, moreover, that he thinks that what we thereby succeed in picking out is a being of an ontologically distinctive type. And this, of course, brings us back to the issue of the ontological constraints on what can play the role of prime matter.

Insofar as prime matter is understood functionally, as that which survives the generation and corruption of ordinary substances, it cannot itself be an ordinary substance. But neither can it be any sort of form or privation. On the contrary, Aquinas tells us, it must be that which ultimately "underlies all forms and privations". What is more, he takes this line of reasoning to be what lies behind Aristotle's famous description of prime matter in *Metaphysics* 7 as "neither a what, nor a quality, nor any of the other categories by which being is divided or determined":

The Philosopher here accepts the account of matter that he had established in the *Physics*, saying: "I claim that matter considered in itself"—that is, in accordance with its essence—"is neither a what"—that is, neither a substance—"nor a quality, nor any of the other categories by which being is divided or determined." (*In Meta.* 7.2.1285)<sup>20</sup>

I will have more to say about Aquinas's conception of prime matter in the next chapter (esp. §§5.4–5). But insofar as he approves here of Aristotle's famous description, it should already be clear that he is assuming that only a being of a very special type can play the role associated with prime matter.<sup>21</sup>

As all of this goes to show, Aquinas's specific account of change places some significant constraints on the types of being that can satisfy both of his specific notions of matter (namely, primary and secondary matter). Aquinas doesn't explicitly identify any similar constraints on his specific notions of form (namely, substantial and accidental form) or on his specific notions of compound (namely, material substance and accidental unity). Even so, we would expect there to be some. After all, we'd expect the distinction between the different types of form and compound to reflect *some* important ontological differences, given the way they are defined. For substantial forms and material substances are both defined by their relation to prime matter, whereas accidental forms and unities are both defined by

<sup>20</sup> Note that in this passage Aquinas speaks of prime matter as having an "essence" (*essentiam*). Ordinarily, Aquinas reserves talk of natures or essences for things possessing a substantial form. But here he relaxes his ordinary way of speaking, presumably to emphasize the *sui generis* character of prime matter. For a very different understanding of the nature or essence of prime matter, one whose connection to Aquinas's account of change is not altogether clear, see Pasnau 2002, 131–42.

<sup>21</sup> Indeed, as we shall see in Chapter 5, Aquinas thinks there is only one type of being that can play the role of prime matter. For the same reason, his functional characterization of prime matter is not "multiply realizable" but rather gives us an indirect way of latching on to a being of a very special type. See again my remarks about Aquinas's functionalism in §1.1, n. 11.



their relation to substances. What is more, in the case of Aquinas's specific notions of compound, there is a further reason to expect ontological differences in what satisfies them—namely, that material substances and accidental unities appear in many cases to belong to very different ontological categories.<sup>22</sup>

### 4.3 A Puzzle about Substantial Change

By now the basic contours of Aquinas's distinction between substantial and accidental change should be clear. There are, however, some serious difficulties that can be raised for his understanding of both types of change. Since these difficulties bear on Aquinas's theory of change as a whole, as well as on its hylomorphic implications, it is worth examining them in some detail. I begin in this section with a puzzle about substantial change, and then turn in the next section to a related puzzle about accidental change.

As we have seen, Aquinas's account of substantial change requires the existence of prime matter, where this is to be understood as a mere subject of endurance—that is to say, a being that can successively take on distinct forms or properties without being characterized by them. But the very idea of a mere subject of endurance seems problematic. To see why, consider again the functional nature of forms or properties, as Aquinas is conceiving of them. Whatever else is true of forms or properties, they would appear to be essentially such as to characterize their possessors. Indeed, this would appear to be a straightforward consequence of Aquinas's general account of change. For according to it, forms or properties—say, *sphericity* and *statuehood*—just are those beings (whatever they are in themselves) that account for the difference involved in change—say, the fact that our lump is a sphere at one time and a statue at another. But, then, if forms are essentially such as to characterize their possessors, the possibility of a mere subject of endurance (and hence of prime matter as Aquinas is conceiving of it) would seem to be ruled out. In short, Aquinas's views appear to commit him to the following three claims, the conjunction of which yields an inconsistent triad:

#### A Puzzle about Substantial Change—An Inconsistent Triad

- (1) There are mere subjects of endurance (i.e., subjects that possess properties but are not characterized by them).
- (2) Forms or properties are essentially such as to characterize their possessors.
- (3) If forms or properties are essentially such as to characterize their possessors, then there can be no mere subjects of endurance.

<sup>22</sup> As we shall see, material substances include such ordinary objects as Socrates and Bucephalus, whereas accidental unities include such extraordinary (or “kooky”) objects as white-Socrates and brown-Bucephalus.

As it turns out, Aquinas has a straightforward way of resolving this puzzle—namely, by rejecting the third claim. In order to see how he can coherently do this, it must be recognized that the plausibility of the claim itself owes to a specific conception of forms or properties—or better, to a specific conception of form or property possession. According to this conception, forms or properties are wholly distinct or “separate” from the subjects that possess them. For convenience, let us refer to this as the *Platonic conception of forms* and let us refer to the relation of form or property possession associated with it as *exemplification* or *participation*.<sup>23</sup> On this conception, if Socrates is human or white, this is because he *exemplifies* (or *participates in*) humanity or whiteness.<sup>24</sup> As this example helps to illustrate, there is no room on the Platonic conception for a distinction between property possession and property characterization. On the contrary, for a subject to be characterized by a property just is for it to possess the property in question. For future reference, we can summarize the most important features of the Platonic conception as follows:

**Platonic Conception of Form or Property Possession**

- The possession of forms or properties is always to be understood in terms of *exemplification*—that is, a relation holding between beings that are wholly distinct (or “separate”) from one another.
- For a subject to be characterized by a form or property *F*-ness just is for it to *exemplify F*-ness.

Obviously, if we consider our puzzle about substantial change in the context of this particular conception, there is no way to make sense of the idea of mere subjects of characterization. But this is not the only possible conception of form or property possession available. On the contrary, there is another conception, which for the sake of contrast we can call the *Aristotelian conception*. According to this further conception, form or property possession is to be understood, in the first place, in terms of *constituency* rather than *exemplification*—that is to say, in terms of a relation that holds between a complex whole and one of its constituent parts. On this conception, if Socrates is human or white, it is because he possesses humanity or whiteness *as a proper part or constituent*.<sup>25</sup> As this example helps to illustrate, on the Aristotelian

<sup>23</sup> In speaking of form or property possession as a ‘relation’ here and in what follows, I don’t mean to insist that it must be conceived of as an ordinary relation (that is, as a polyadic property as opposed, say, to a nexus or non-relational tie). For the standard worries about conceiving of exemplification as an ordinary relation, see Loux 2006.

<sup>24</sup> Proponents of the Platonic conception are usually happy to allow that something can exemplify some of its properties essentially and others of them contingently or accidentally, and hence that exemplification itself is a relation that can hold either essentially or contingently.

<sup>25</sup> I’m ignoring here some complications that arise for the possession of contingent or accidental properties. Strictly speaking, if Socrates is white, for Aquinas, this is because he is appropriately related to something else that possesses whiteness as a proper part or constituent. See §4.4.

conception, forms or properties are conceived of as “immanent to” (rather than “separate from”) their subjects of characterization.

So far so good. But there is a further wrinkle. According to the Aristotelian conception, whenever a complex whole possesses a form or property as a constituent, and hence is characterized by it, that same whole will also possess a constituent of another type. Thus, in order to explain how Socrates is human, Aristotelians appeal not only to Socrates and his constituent humanity, but also to a further constituent—some matter or substratum—to which Socrates’s humanity can also be said to belong (though in a different sense). Indeed, proponents of the Aristotelian conception typically think that it is precisely because there is some matter or substratum possessing the form of humanity (in its distinctive way) that there exists a substance (Socrates) which both has humanity as a constituent *and* is characterized by it.<sup>26</sup>

This appeal to a further type of property possession—one that holds between matter (or substrata) on the one hand, and forms (or properties) on the other—is perhaps what makes the Aristotelian conception most distinctive. Aristotelians often speak of this relation in terms of *predication* or *instantiation*.<sup>27</sup> But since this might suggest that matter is itself characterized by the forms or properties it possesses, I shall follow Aquinas in speaking of this relation in terms of *inherence* instead.

With this terminology in hand, we can summarize the most important features of the Aristotelian conception as follows:

#### Aristotelian Conception of Form or Property Possession

- The possession of forms or properties is to be understood, primarily, in terms of *constituency*—that is, a relation holding between a complex and one of its parts or constituents.
- The possession of forms or properties can be understood, secondarily, in terms of *inherence*—that is, a relation holding between distinct parts of some larger complex.
- For a subject to be characterized by a form or property *F*-ness just is for it to have *F*-ness as a constituent part.

As this summary helps to bring out, Aristotelians differ from Platonists both in the number of beings and in the number of relations that they appeal to in their conception of property possession. Thus, Platonists appeal to just two beings (a subject and a property) and one relation (exemplification, which links things wholly distinct from one another). By contrast, Aristotelians appeal to three beings (a complex, a property, and a

<sup>26</sup> For an example of someone who attributes this sort of view to Aristotle, see Loux 2005. For an example of someone who takes himself to be a contemporary Aristotelian in this regard, see Armstrong 1989 and 1997.

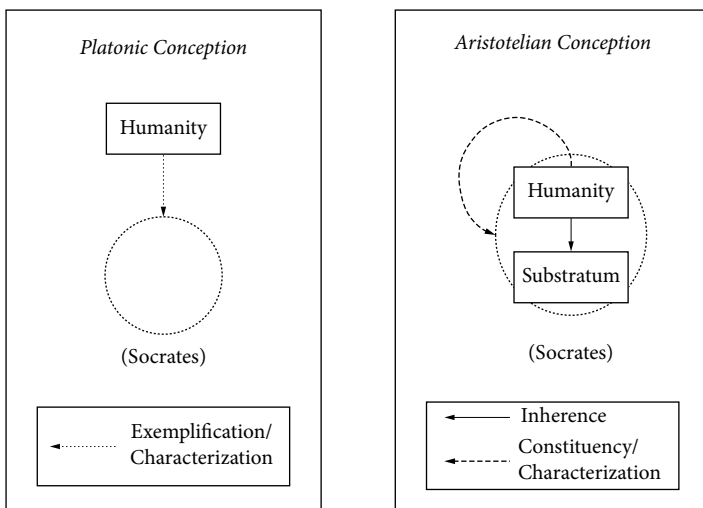
<sup>27</sup> Loux 2005 speaks of *predication*, and Armstrong 1989 and 1997 speak of *instantiation*.

substratum) and two relations (constituency and inherence, the former of which links complexes with their proper parts or constituents, and the latter of which links distinct parts of a common whole).

For the sake of clarity, let us illustrate these differences with respect to a particular example of property possession. Consider, therefore, the diagram at Fig. 4.1, which represents the different ways in which Platonists and Aristotelians conceive of Socrates's being human (using circles to stand for Socrates, rectangles to stand for properties and substrata, and spatial relations to indicate the presence or lack of constituency).

As this diagram indicates, Platonists and Aristotelians differ not only in the number of beings and relations they appeal to, but also in their understanding of characterization. Thus, whereas Platonists associate characterization with property possession as such, Aristotelians associate it with only one type of property possession—namely, constituency.

Now it might be objected that, in separating inherence from characterization, Aristotelians have made it impossible for us to have any clear grasp of inherence as a type of property possession. It seems to me, however, that this objection is mistaken. For at least as Aquinas is conceiving of inherence, it is simply that relation which links subjects of endurance—or the substrata involved in change—to the forms or properties with respect to which they change.<sup>28</sup> Granted, it is initially tempting to assume that if something changes with respect to some forms or properties, it must



**Figure 4.1** Ordinary Property Possession: Socrates's Being Human

<sup>28</sup> This conception creates difficulties for understanding Aquinas's account of accidental change, but I shall hold off discussing these until the next section.

also be characterized by the forms or properties with respect to which it changes. But as our earlier discussion of substantial change indicates, this is not in fact the case. Indeed, if we're going to preserve the possibility that substances themselves can be generated and corrupted—something taken for granted by our pre-theoretical view of the world—then it would seem that we must distinguish subjects of endurance from subjects of characterization.

If we return to our puzzle about substantial change with the Aristotelian conception of forms in mind, we can see that there is no longer any obstacle to rejecting the third member of the inconsistent triad. For although forms or properties, on this conception, are essentially such as to characterize *certain* of their possessors—namely, the compounds (or complexes) of which they are a part—this is perfectly consistent with their also having possessors that qualify as mere subjects of endurance. In fact, as we can now see, mere subjects of endurance are best understood in terms of mere subjects of inherence—that is to say, subjects having properties that inhere in but do not characterize them. And, of course, this is precisely the sort of subject that the Aristotelian conception makes possible.

The question, of course, is whether Aquinas accepts the Aristotelian conception of forms. There can, I think, be little doubt that he does. For one thing, this conception appears to be required by his repeated insistence, both in the context of change and elsewhere, that hylomorphic compounds are genuinely complex—that is to say, entities that literally possess their matter and form as proper parts or constituents. To cite just two of the clearest examples of such insistence from the *De principiis naturae*:

Matter and form are said to be intrinsic to a thing because they are *parts* which constitute the thing. (DPN 3.48–50)

They [i.e., matter and form] are said to be related to a compound as *parts* to a *whole*, or as what is *simple* to what is *complex*. (DPN 4.42–43)<sup>29</sup>

As we have seen, moreover, the Aristotelian conception of forms appears to be tailor-made for rendering Aquinas's views about substantial change intelligible. Indeed, I think this conception's ability to make sense of substantial change (together with the fact that the existence of such change is intuitively plausible to begin with) not only provides us with compelling evidence that Aquinas was operating with such a conception, but also explains his insistence on the composite nature of hylomorphic compounds.<sup>30</sup>

<sup>29</sup> For similar such remarks outside *DPN*, see also *SCG* 2.54, *QDA* 1.1 ad 13, and *In Meta.* 7.2.1295.

<sup>30</sup> As noted in Chapter 3 (§3.5, n. 25), there is a debate in the secondary literature on Aristotle concerning the proper interpretation of his hylomorphic compounds, and in particular whether they should be regarded as literally composed of matter and form. If Aquinas is right in thinking that his position reflects Aristotle's own, we have an answer to this question: such entities must be regarded as literally composite, if for no other reason than because Aristotle's analysis of substantial change requires it. For a summary and critical evaluation of this debate, including a different (but perhaps not ultimately incompatible) reason for accepting this interpretation of Aristotle, see Loux 2005.

Finally, it seems to me that there are good independent reasons, deeply entrenched in the medieval discussion of universals, for thinking that Aquinas accepts the Aristotelian conception. In *De ente et essentia*, for example, he offers the following two reasons for preferring an Aristotelian conception of forms to one according to which they are “something existing outside singulars, as the Platonists believed”:

For in the latter case, a genus [such as *animal*] or a species [such as *human*] could not be [essentially] predicated of an individual; for Socrates cannot be said to *be* something that is separate from him. Again, what is separate would be of no use in the cognition of such a singular. (DEE 3.16–20)

These two objections to the Platonic conception—that only immanent forms or properties can essentially characterize substances and hence explain our knowledge of them—are not likely to convince anyone not already antecedently disposed to accept the Aristotelian conception of property possession. Even so, they leave us with little doubt about which conception of forms or properties Aquinas himself endorses.

#### 4.4 A Puzzle about Accidental Change

I have been arguing that, if we want to make sense of Aquinas's account of substantial change, we must interpret it in light of the Aristotelian conception of forms. For reasons I will now explain, this same interpretation appears to raise trouble for Aquinas's account of accidental change.

Recall what is supposed to be the distinctive feature of accidental change—namely, that it involves a subject (more specifically, a substance) that not only *possesses* distinct forms or properties over time, but is successively *characterized by* these same properties.<sup>31</sup> The Aristotelian conception of forms threatens to make this feature of accidental change unintelligible. To see why, return once again to the change involved in our statue example, in which the enduring subject or matter is the lump of bronze. If we approach this example from the perspective of the Aristotelian conception, we will think of the lump of bronze as having the distinct properties of sphericity and statuehood successively *inhering* in it. Given the distinction between inherence and characterization, however, it would appear that the lump of bronze cannot be successively *characterized by* these properties. For according to the Aristotelian conception, the only things characterized by properties are the complex wholes of which the properties themselves are constituent parts—in this case, the sphere and statue, respectively. Not only does this conflict with what we described as the distinguishing feature of accidental change, it also threatens the coherence of the very idea that a subject can be contingently characterized by certain of its forms or properties. For insofar as Aristotelians conceive of spheres, statues, and other such

<sup>31</sup> As argued previously (§4.2), this is the point of Aquinas's describing the subject of accidental change as the matter “in which” something comes to be.

entities as complex wholes that exist in virtue of their constituent properties inhering in some matter, it would appear to follow that all property characterization is non-contingent or essential.

Once again, therefore, Aquinas's views appear to commit him to an inconsistent triad:

**A Puzzle about Accidental Change—Another Inconsistent Triad**

- (1) Some things are successively (and so contingently) characterized by the forms or properties they possess.
- (2) The Aristotelian conception of forms is true.
- (3) If the Aristotelian conception of forms is true, then things cannot be successively (and so contingently) characterized by the forms or properties they possess.

As with our previous puzzle, Aquinas's resolution of this one is straightforward—he rejects the third member of the triad. And once again, the coherence of his rejecting the relevant claim depends on his appeal to a broadly Aristotelian doctrine—though this time the doctrine concerns the relationship between distinct hylomorphic compounds rather than subjects and properties. To see what this further Aristotelian doctrine amounts to, and how it enables Aquinas to avoid this further puzzle, it will be best to approach the doctrine itself indirectly, by turning first to certain developments in the secondary literature on Aristotle regarding his views about accidental unities.<sup>32</sup>

In recent years, an increasing number of commentators on Aristotle have come to think that his accidental compounds or unities stand in a very special relation to the substances that function as their matter (what are often referred to as the *parent substances* of such compounds).<sup>33</sup> The reason for this is that Aristotle himself suggests, at various places in his writings, including his *Physics* and *Metaphysics*, that entities such as white-Socrates and Socrates, or musical-Coriscus and Coriscus are *one in number but not in being*.<sup>34</sup> Or again, that such entities are *distinct*, but nevertheless *to be counted as one*.<sup>35</sup> In some of these texts, Aristotle even seems to extend this doctrine to accidental compounds that are distinct, but share a common parent substance (so that, for example, white-Socrates and musical-Socrates are not

<sup>32</sup> I should perhaps emphasize that it is no part of my project in what follows to take a stand on the proper interpretation of Aristotle. On the contrary, I merely help myself to an increasingly popular interpretation of his views in order to facilitate the introduction of an otherwise puzzling and unfamiliar doctrine.

<sup>33</sup> See F. Lewis 1982 and Matthews 1982 and 1992, as well as the further sources cited in Cohen 2008.

<sup>34</sup> *Topics* A7, 103a23–31; *Physics* A3, 190a17–21, 190b18–22; *Metaphysics* D6, 1015b16–22, 1016b32–1017a6; *Metaphysics* D9, 1024b30–1.

<sup>35</sup> *Topics* A7, 103a23–31; *Metaphysics* D6, 1015b16–22, 1016b32–1017a6.

only numerically the same as Socrates, but also numerically the same as each other). Because Aristotle takes the sameness in these particular cases to hold only accidentally—on the grounds that parent substances can typically exist without the accidental compounds of which they are a part—commentators habitually describe this doctrine as one of ‘accidental sameness’.<sup>36</sup> It seems to me, however, that we would do better to describe this doctrine as one of ‘numerical sameness without identity’, since the sameness in question is clearly a variety of *numerical* sameness and it is the claim that this variety of sameness is compatible with the non-identity of its relata that makes the doctrine itself so distinctive.<sup>37</sup>

But however we describe the doctrine, it is hard not to balk at it, at least on first hearing. After all, what could it possibly mean to say of two (or more) distinct things that they are numerically one and the same object, and hence to be counted as one? A little reflection, however, reveals that there is a straightforward answer to this question: it just means that the things in question completely overlap with respect to their matter (at some time).<sup>38</sup> This way of understanding the doctrine has a number of advantages. First, it makes the doctrine perfectly intelligible (since there is no obvious absurdity in distinct things completely overlapping with respect to their matter—say, a material object and some event it enters into). Second, it provides a simple explanation for why Aristotle would apply the doctrine to accidental unities sharing the same parent substance (since in virtue of sharing the same parent substance, such entities will share all of their matter in common). Finally, and perhaps most importantly, it makes the doctrine plausible in particular cases—namely, in those cases that give rise to the so-called problem of material constitution. This last point requires a bit of explanation.<sup>39</sup>

Suppose we set our bronze statue on an otherwise empty table and ask: How many material objects are there in the place filled by our statue—one or more than one? Because the statue and lump of bronze completely overlap with respect to their matter, it is tempting to think the answer is ‘one—and only one—object’. If we wanted to sell the statue, for example, we wouldn’t charge for the statue *and* the lump. And this is because, in line with common sense, we count statues and lumps, and ordinary objects more generally, by their matter. Note, however, that insofar as we are inclined to think that statues are distinct from lumps, we also appear to have

<sup>36</sup> See again the references cited in n. 33, this chapter.

<sup>37</sup> Indeed, once we admit this variety of sameness, there would seem to be no reason in principle not to allow it to hold essentially. See Brower and Rea 2005 for one context (namely, the Christian doctrine of the Trinity) that appears to require a form of numerical sameness without identity to hold essentially.

<sup>38</sup> Three clarifications. First, when I speak of ‘matter’ here, I am using the term in its primary or proper sense—that is, to refer to what Aquinas calls ‘prime matter’. Second, I have added the qualification ‘at some time’ in order to emphasize that this doctrine applies only to synchronic (as opposed to diachronic) sameness. Things may share all the same matter over time (or diachronically) and yet fail to be numerically the same (as is the case in all one–one changes). Third and finally, from the fact that things share all of the same matter it doesn’t follow that they are numerically the same *F*, for every *F*. On the contrary, for reasons to be explained shortly, it follows only that they are the same *material object*.

<sup>39</sup> The discussion that follows builds on ideas first presented in Rea 1998a, and further developed and defended in Brower and Rea 2005 and Brower 2011. See also §7.3, this volume.



reason for thinking that there is, in fact, more than one object in the place occupied by our statue. After all, we could always melt down our statue and recast it as a sphere, in which case the same lump of bronze would remain (albeit in a different shape) but the statue would not. This fact strongly suggests that the lump is not identical with the statue after all, because they have different persistence conditions. But, then, this latter judgment—itsself fairly intuitive—appears to be in conflict with common sense.

As it turns out, the Aristotelian doctrine of numerical sameness without identity allows us to reconcile these conflicting intuitions—and in a particularly elegant way.<sup>40</sup> For the doctrine tells us to count material objects by their matter, but hylomorphic compounds by identity. Or, more precisely, it tells us the following:

#### Numerical Sameness without Identity

For any hylomorphic compounds  $x$  and  $y$ , where  $x \neq y$ , and any time  $t$ ,  $x$  is numerically the same material object as  $y$  at  $t$  if and only if  $x$  and  $y$  share all their prime matter in common at  $t$ .

In light of this understanding of the doctrine, we can explain why we are tempted to think of our statue and lump as both one and many. For according to it, they turn out to be one and the same *material object*, but many, distinct *hylomorphic compounds*.<sup>41</sup>

We are now in a position to appreciate the relevance of this broadly Aristotelian doctrine to our puzzle about accidental change. For once we combine this doctrine with the Aristotelian conception of forms, it becomes possible to distinguish more than one way in which a subject can be characterized by forms or properties. Given the Aristotelian conception, we can always say that subjects are characterized, *primarily* or *in the first instance*, by the forms (or properties) that they possess as proper parts or constituents—or better, as *immediate* proper parts or constituents.<sup>42</sup> Thus, our sphere is characterized primarily or *simpliciter* by the form or property of *sphericity*, whereas our statue is characterized primarily or *simpliciter* by the form or property of *statuehood*. In addition to such primary property characterization, however, the doctrine of numerical sameness without identity enables us to say that subjects are also characterized *in a secondary or derivative sense* by the constituent properties of things with which they are numerically the same but not identical. The intuitive idea here is that numerical sameness is such an intimate relation that, by virtue of coming to bear it to something else, a compound can take on or inherit

<sup>40</sup> Whether or not this understanding of the doctrine captures Aristotle's own views, I shall assume in what follows that it is of at least broadly Aristotelian provenance.

<sup>41</sup> For further development and defense of this doctrine, see Chs 6–7 and 10 (esp. §6.4, §7.3, and §§10.2–4).

<sup>42</sup> Let us say that  $x$  is an immediate proper part of  $y$  if and only if (i)  $x$  is a proper part of  $y$ , and (ii) there is no  $z$  such that  $x$  is a proper part of  $z$  and  $z$  is a proper part of  $y$ .

certain characteristics of that other thing.<sup>43</sup> Thus, even if it is true that only statues or spheres can be characterized by statuehood or sphericity primarily or *simpliciter*, since only they possess the relevant properties as immediate proper parts or constituents, nonetheless when a lump of bronze comes to share the same matter as a statue or sphere (which it can do merely by having statuehood or sphericity come to inhere in it), it will thereby come to be characterized by the relevant property *derivatively*.<sup>44</sup> To state these notions of property characterization more precisely:

### Two Types of Property Characterization

- *Primary property characterization* =<sub>def</sub> A hylomorphic compound *a* is characterized by a property *F-ness simpliciter* if and only if *a* possesses *F-ness* as an immediate proper part or constituent.
- *Derivative property characterization* =<sub>def</sub> A hylomorphic compound *a* is characterized by a property *F-ness* derivatively if and only if *a* shares the same matter as a distinct hylomorphic compound *b* that is characterized by *F-ness simpliciter*.

As it turns out, these two different types of property characterization are all we need to resolve our puzzle.<sup>45</sup> Accidental change, as we've seen, requires the possibility of a subject's being contingently (or accidentally) characterized by some form or property. But this possibility makes perfect sense in light of the notion of derivative characterization. For as the definition just given makes clear, derivative characterization is something that holds when a substance is part of a larger accidental compound. But since substances can, in general, exist independently of the accidental compounds of which they are a part, the sort of characterization that holds in virtue of such a relation will also be contingent or accidental.<sup>46</sup>

In short, the distinction between primary and derivative characterization helps us to see why the third member of our puzzle about accidental change is false. Although the Aristotelian conception of forms does entail that things cannot be successively (and so contingently) characterized *primarily* by the forms or properties inhering in them, it doesn't rule out the possibility of their being successively (and so

<sup>43</sup> Strictly speaking, one does not have to accept the doctrine of numerical sameness without identity to accept this point. A subject's coming to share all the same matter as another thing would by itself seem to be sufficient for it to be characterized by the constituent properties of that other thing (regardless of whether complete overlap of matter is taken to be sufficient for a type of sameness without identity). See Ch. 6 (esp. §§6.3–5) for further discussion of how exactly such property characterization is supposed to work.

<sup>44</sup> See Cohen 2008, which provides textual grounds for attributing this sort of view to Aristotle. See also Baker 2000 for a different account of derivative property characterization.

<sup>45</sup> The distinction between these two types of property characterization corresponds roughly to the standard medieval distinction between *per se* and *denominative predication*.

<sup>46</sup> I'm ignoring here a complication having to do with *propria* or necessary accidents—though I shall return to it shortly.

contingently) characterized *derivatively* by these same forms or properties. Indeed, if the Aristotelian doctrine of numerical sameness without identity is true, it is precisely in terms of such derivative characterization that we should understand all accidental change.

As in the case of our previous puzzle, here too we have an Aristotelian doctrine tailor-made for resolving a difficulty in Aquinas's views. And once again, this seems to create a strong presumption in favor of attributing the doctrine to Aquinas himself—a presumption that can likewise be further strengthened on the basis of textual evidence.

As far as I know, there are no texts in which Aquinas straightforwardly and unequivocally asserts the doctrine of numerical sameness without identity in precisely the form that I have presented it. Even so, there are texts in which he comes close to doing so. To take the clearest first, consider the following passage from his commentary on the *Metaphysics*:

Those things are one in number whose matter is one . . . Indeed, it is on account of matter that a singular thing (*singulare*) is both one in number and divided from other things. (*In Meta.* 5.8.876)

The first sentence of this passage is naturally read as an assertion of the central idea behind the doctrine of numerical sameness without identity—namely, that *matter-sharing* (at a time) is sufficient for numerical sameness (at that time).<sup>47</sup> For, as we have seen, Aquinas's views about change commit him to the existence of compounds sharing all the same matter (e.g., material substances such as Socrates and accidental unities such as white-Socrates). But according to the first sentence, such things must be regarded as “one in number” precisely because their “matter is one”. The second sentence of the passage goes even further, insisting as it does that matter is just that in virtue of which things count as singular. Assuming, as seems natural, that Aquinas is using ‘*singulare*’ in this context to refer only to material objects (i.e., only to things possessing matter), the passage as a whole comes close to stating the doctrine in precisely the form presented earlier: two (or more) hylomorphic compounds that share the same matter (at some time) are the same material object (at that time).<sup>48</sup>

There are other passages that provide more indirect support for the doctrine. For example, Aquinas discusses accidental compounds or unities at a number of places in his writings, and many of the things he says about them are precisely the sorts of

<sup>47</sup> The reference to time, though not explicit, is clearly required by Aquinas's views, since as already indicated (n. 38, this chapter), in paradigm cases of one–one change numerically distinct objects possess the same matter at different times.

<sup>48</sup> Admittedly, this passage is not part of a discussion of change. But that by itself would seem to be of little consequence. The fact that Aquinas's clearest statement of the doctrine comes from outside the context of change gives us no reason to doubt that he endorses the doctrine within that same context. On the contrary, it gives us further reason to suppose he accepts it, especially if (as I've been suggesting) the theory of change is one of the contexts that motivates the doctrine in the first place.

things that have led commentators to attribute the doctrine of numerical sameness without identity (or accidental sameness) to Aristotle.<sup>49</sup> To take just one example directly associated with Aquinas's views about accidental change, consider the following passage from his *Physics* commentary:

When someone becomes musical, the man survives, but the [form or property] contrary [to being musical] does not . . . Nor does the *compound of subject and contrary* survive, for the *non-musical man* does not survive after the man has become musical. (*In Phys.* 1.12.5)

Here Aquinas is discussing a change involving someone (say, Socrates) acquiring the accidental form or property of being musical. In this connection, he makes three points, which appear to extend to accidental changes in general. First, the subject of change does not merely take on a form or property, but comes to be characterized by it—Socrates himself *becomes* musical. Second, this change involves the generation and corruption of distinct accidental compounds—say, musical-Socrates and non-musical-Socrates. Third and finally, the subject of change must be regarded as distinct from the accidental compounds that serve as the termini of the change, since it can exist without them. Thus, when Socrates becomes musical, Aquinas tells us, “the man survives” but not the “form or property” or even the “compound” composed of the man and such a form or property. Evidently, therefore, Aquinas is assuming that, when Socrates becomes musical, we have two distinct things (namely, Socrates and musical-Socrates) that become numerically one and the same.<sup>50</sup>

Finally, the doctrine of numerical sameness without identity appears to be required not only by Aquinas's views about accidental change, but also by his views about accidental predication. To see why, suppose that each of the following two ordinary predications is true:

#### Examples of Ordinary Predication

- (1) Socrates is human.
- (2) Socrates is white.

As Aquinas sees it, the first of these predications is essential (or substantial), whereas the second is accidental. What is more, Aquinas thinks there are two different types of question that we can ask about these predications.<sup>51</sup> The first has to do with their basis in extramental reality: In virtue of what are they true? The second has to do with their content: What is being asserted by predications of each type? In order to answer the first question, Aquinas thinks that we need only appeal to the existence of the

<sup>49</sup> For an extensive list of passages where Aquinas discusses such compounds, see Brown 2005, 65, n. 27.

<sup>50</sup> See Cohen 2008, who develops the same line of argument in connection with the corresponding passage of Aristotle's *Physics*.

<sup>51</sup> See the texts and discussion in Ashworth 2004, esp. 524–7.

right sort of hylomorphic compound—namely, a material substance in the first case, and an accidental unity in the second. For in each case, he says, their truth is explained by compounds composed of the right sort of matter and form:

When I say ‘Socrates is human’, the truth of this statement is explained by the composition of the form of humanity with the individual matter by which Socrates is *this* human. Likewise, when I say ‘Socrates is white’, the explanation of its truth is the composition of whiteness with a subject. And similarly in other such cases. (*In Meta.* 9.11.1898)<sup>52</sup>

So much for the extramental basis for such predications. What about their content?

Here, too, Aquinas often relies on talk of compounds (or composition) to explain his views. Just as hylomorphic compounds arise from the composition of matter and form in extramental reality, so too, he suggests, affirmative predications, which he takes to be mental propositions, arise from the composition of subjects and predicates in the mind. Even so, Aquinas insists, the type of “composition” involved here is very different from that involved in extramental compounds of matter and form:

Composition in the mind (*compositio intellectus*) differs from composition in extramental reality (*compositio in re*). For the things that are brought together in extramental reality to compose something [namely, matter and form] are distinct, whereas composition in the mind signifies the sameness (*identitatis*) of the things that it brings together [namely, subject and predicate]. Thus, the mind does not bring things together in such a way as to assert that a man is whiteness. On the contrary, what it asserts is that a man is white—that is, that a man is *something having whiteness*. But the man and the thing having whiteness are the same in subject. And something similar holds for the composition of [substantial] form and [prime] matter. (*ST* 1.85.5 ad 3)

As this passage suggests, what Aquinas takes to be distinctive about composition in the mind is that it results in complexes (namely, predications or propositions) that assert some form of sameness (*identitas*) holding between their parts (namely, subjects and predicates).<sup>53</sup> And this has an obvious bearing on our question about how Aquinas understands the content of ordinary predications of the form ‘*a* is *F*’.

<sup>52</sup> Like other medieval philosophers, Aquinas often speaks of forms or properties as “that in virtue of which” (*quo*) things are characterized in various ways. In previous work (see Brower 2008 and 2009), I followed Fox 1987 in taking this to show that medievals regard forms or properties themselves as the extramental basis or “truthmakers” for ordinary predications of the form ‘*a* is *F*’. But I now regard this as a mistake, at least in the case of Aquinas. Although speaking of a form or property *F*-ness as “that in virtue of which *a* is *F*” can be taken to imply that *F*-ness is a complete explanation of *a*’s being *F*, it needn’t be. On the contrary, it can be taken more modestly to imply merely that *F*-ness is a salient or important part of the explanation of *a*’s being *F*. And as the passage just quoted makes clear, when Aquinas adopts the relevant mode of speech in the context of forms alone, he should be understood in the more modest way (since the complete explanation involves appeal to the composition of form with matter).

<sup>53</sup> See *ST* 1.13.12: “In every true affirmative proposition, the subject and predicate must somehow signify the same thing in reality (*idem secundum rem*).” It is important to note that ‘*identitas*’ is a term of art in medieval philosophy, covering a number of different relations, and hence it should not be assumed that it can be straightforwardly transliterated as ‘identity’. For some discussion of Aquinas’s use of this term, see Schmidt 1966, 195–6.

Indeed, it suggests that he just takes them to be asserting the sameness of *a* with an *F*. But if that's right, then, strictly speaking, predications (1) and (2) above should be interpreted as follows:

**Examples of Ordinary Predication—Revisited**

- (1\*) Socrates is the same as a human (or something having humanity as a constituent).
- (2\*) Socrates is the same as a white thing (or something having whiteness as a constituent).

In the case of (1\*), the interpretation seems unproblematic. To say that Socrates is the same as a human is presumably just to say that he is *identical to* something having humanity as a constituent—which is precisely what we would expect, given Aquinas's view that Socrates *just is* a material substance. In the case of (2\*), however, things are more problematic. On Aquinas's view, Socrates is *not* identical to a thing having whiteness as a constituent, but is rather himself a constituent part of such a thing. But, then, in what sense can Socrates be said to be the same as something having whiteness as a constituent? The doctrine of numerical sameness without identity provides a straightforward (and, indeed, what appears to be the only possible) answer: insofar as Socrates and the white thing in question share all the same matter, they are numerically the same but not identical.<sup>54</sup> Interpreting (2\*) in this way helps us to see that Aquinas's views about accidental predication are, in fact, part of a unified theory of predication according to which (i) ordinary (intrinsic) predications are to be interpreted in terms of numerical sameness (with or without identity), (ii) essential or substantial predications are to be interpreted in terms of identity, and (iii) accidental (intrinsic) predications are to be interpreted in terms of numerical sameness without identity.<sup>55</sup>

In addition to making sense of Aquinas's views about accidental predication, it is worth noting that this interpretation has a further benefit, insofar as it enables us to make sense of something that often strikes contemporary philosophers as puzzling—namely, the idea, common in medieval philosophy and explicitly endorsed by Aquinas, that there are *propria* or necessary accidents (i.e., accidents not contingently possessed by their bearers).<sup>56</sup> In the contemporary literature, it is standard to identify accidental (or non-essential) properties with contingent properties. From the

<sup>54</sup> This, I take it, is the point of Aquinas's talk of Socrates and white-Socrates as “the same in subject”. Indeed, insofar as Socrates just is the subject (or secondary matter) of white-Socrates, they will share all the same (prime) matter, and hence be numerically the same (but not identical).

<sup>55</sup> I shall have more to say about Aquinas's views about predication in §§6.3–5. See also Ashworth 2004 (esp. 527) for some complications concerning the signification of ordinary nouns vs. adjectives.

<sup>56</sup> See, e.g., *ST* 1.9.2, 1–2.2.6; *QDV* 21.1 ad 10.

contemporary perspective, therefore, the puzzle about *propria* or necessary accidents is how there could be any.<sup>57</sup>

But notice that Aquinas does not accept this identification. On his view, the distinction between a substance's essential (or substantial) and accidental properties is not that between its necessary (or non-contingent) and contingent properties. On the contrary, it is the distinction between its constituent and inherent properties—or better, between its constituent properties and the constituent properties of the larger wholes or complexes of which it is the matter (or parent substance). There is, however, no absurdity in supposing that a substance is necessarily (as opposed to merely contingently) part of certain larger complexes. Thus, when Aquinas speaks of risibility (or the capacity for laughter) as a necessary accident or *proprium* of human beings, we can take this to mean that certain types of material substance (those composed of prime matter and humanity) cannot exist without there also being certain larger wholes of which they are a proper part (those composed of human beings and the form of risibility).

For all these reasons, therefore, I conclude that Aquinas accepts the doctrine of numerical sameness without identity, and that just as we can make sense of his views about substantial change in terms of the Aristotelian conception of forms, so too we can make sense of his views about accidental change in terms of this broadly Aristotelian doctrine. Indeed, if the arguments of this chapter are successful, there would, in the end, appear to be no inconsistency in Aquinas's views about substantial or accidental change, provided we understand these views in the broadly Aristotelian way that Aquinas intends them.

<sup>57</sup> See, e.g., Gorman 2005 for discussion and references.

## PART III

# Hylomorphism





# 5

## From Change to Hylomorphism

Having examined Aquinas's theory of change in Part II (Chs 3–4), I turn in Part III (Chs 5–7) to the broadly Aristotelian hylomorphism to which it gives rise. In this chapter, I do two things. First, I summarize the most important results arrived at so far. Second, I clarify the ways in which Aquinas's hylomorphism goes beyond his theory of change, especially in connection with his understanding of the metaphysics of prime matter.

### 5.1 Change and Functional Hylomorphism

In our discussion to this point, we have been operating with something like the following understanding of hylomorphism:

#### **Hylomorphism**

For some range of objects, those objects are hylomorphic compounds—that is, objects possessing both matter (*hyle*) and form (*morphe*).

So understood, we can identify three main ways in which Aquinas's theory of change bears on his hylomorphism.

First, Aquinas's general account of change (together with the common-sense assumption that change actually occurs) guarantees that at least some objects in the world exhibit hylomorphic structure. For according to this general account, change is to be understood in terms of the generation and corruption of hylomorphic compounds. But, then, given the assumption that change actually occurs, it follows straightforwardly that there must be a range of objects to which the doctrine of hylomorphism applies—namely, all those objects capable of undergoing generation and corruption.

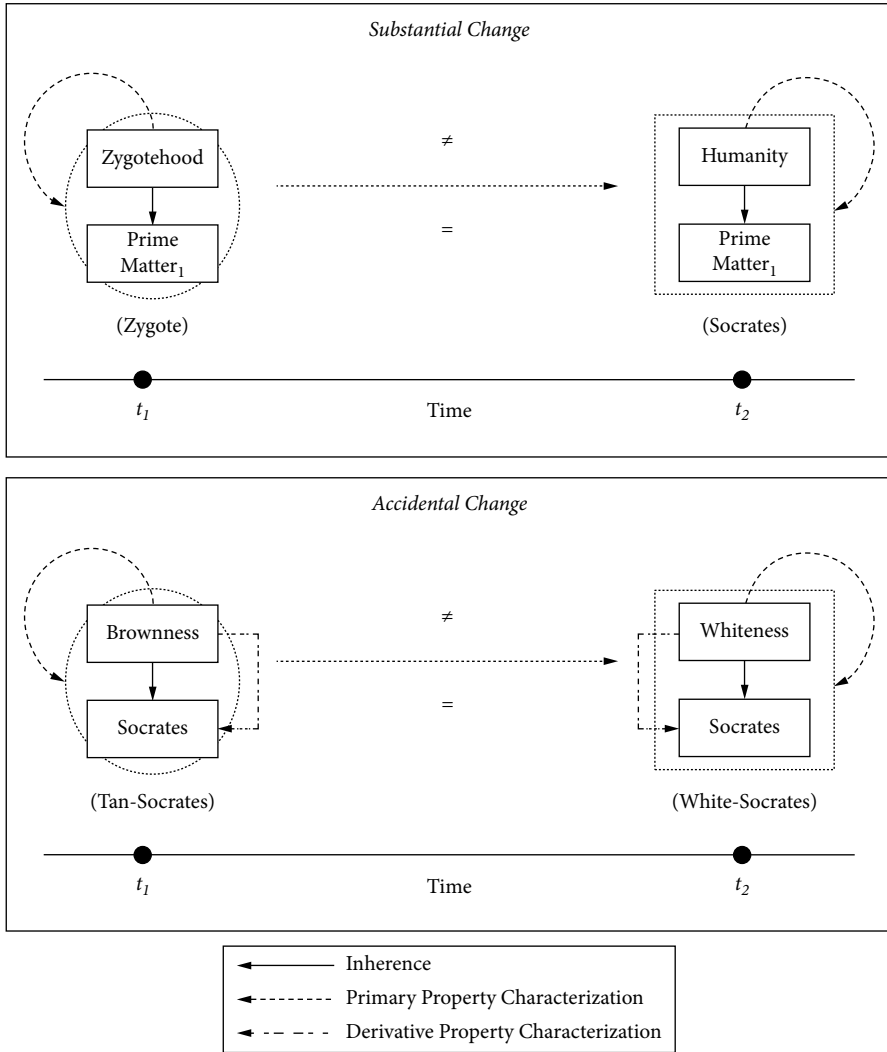
Second, Aquinas's specific account of change (together with the common-sense assumption that substantial and accidental change actually occur) has a number of further implications for the structure of hylomorphic compounds and their relationship to one another. In particular, it guarantees that each of the following is true:

**Implications of Change for Hylomorphism**

- (a) There are different kinds of matter, form, and hylomorphic compound (in fact, two kinds of each—primary vs. secondary matter, substantial vs. accidental forms, and material substances vs. accidental unities).
- (b) Matter possesses forms via inherence.
- (c) Hylomorphic compounds exist in virtue of the inherence of form in matter.
- (d) Hylomorphic compounds possess matter and form via constituency, and hence are composed of them.
- (e) Distinct hylomorphic compounds sharing the same matter (at a time) are numerically one and the same material object (at that time).
- (f) Hylomorphic compounds are characterized by the forms they possess (via constituency), but matter is not characterized by the forms it possesses (via inherence).
- (g) Hylomorphic compounds are characterized *primarily* or *simpliciter* by the forms they possess via constituency, whereas they are characterized *secondarily* or *derivatively* (and typically also contingently) by the forms they possess via inherence.

Third and finally, we can see that for all Aquinas's theory of change tells us about his hylomorphism, it nonetheless falls short of a full-blown metaphysical theory. Granted, his theory of change does place some important restrictions on the types of being that can play the roles that he assigns to matter, form, and compound. Moreover, we have seen that, on occasion, Aquinas speaks *as if* these roles could be played only by individuals, properties, and states of affairs respectively. Even so, it should be clear that questions about the precise nature of matter, form, and compound go beyond the theory of change as such—which is to be understood in primarily functional (rather than categorical) terms—and hence that different answers to these questions are in principle compatible with this theory. In the end, therefore, it is perhaps better to speak of Aquinas's theory of change as providing a *general metaphysical framework* in terms of which a full-blown metaphysics of matter, form, and hylomorphic compounds can be developed.

Before pressing ahead, it may be useful to try to illustrate what we have seen of this general metaphysical framework using a pictorial representation—one that enables us to catalog all the different types of change, matter, form, and compound that Aquinas recognizes, as well as all the other important distinctions that we've drawn to this point. For the sake of continuity, I shall focus on Aquinas's two favorite examples of change involving human beings—the substantial change by which a human being is generated and the accidental change by which a human being comes to be white. Moreover, for the sake of convenience, I shall assume that human beings are always generated from a single thing (namely, a zygote) rather than from many things (namely, sperm and



**Figure 5.1** Change and Functional Hylomorphism: The Big Picture

menstrual blood or ova). This latter assumption is convenient because it allows us to think of the generation of human beings on the model of one-one change, which has been our focus throughout. It is important to emphasize, however, that in making this assumption I do not intend to be taking a stand on any of the substantive metaphysical or interpretive issues surrounding Aquinas's embryology, all of which are highly controversial.<sup>1</sup> Consider, therefore, the diagram at Fig. 5.1.

<sup>1</sup> In particular, I do not mean to be suggesting either (a) that zygotes are non-human, or (b) that Aquinas would have regarded them as such if he'd been aware of the relevant contemporary biology. For an introduction to some of the controversy surrounding these issues, see the exchange between Pasnau and Haldane and Lee (Pasnau 2002, ch. 4 and 2003, and Haldane and Lee 2003a and 2003b) and references cited therein.

As this diagram is intended to show, substantial and accidental change both admit of a common structure or analysis for Aquinas. In each case, there will always be some matter, forms, and compounds—where the *matter* is that which stays the same or endures the change; the *forms* are that with respect to which the matter changes; and the *compounds* are that which serve as the termini of the change, and hence as the entities generated and corrupted. What is more, the forms are always possessed in different ways by different subjects—via *inherence* by matter and via *constituency* by compounds—and are also such that they always *primarily characterize* the compounds of which they are the constituents, never the matter in which they inhere.

In addition to highlighting the similarities between substantial and accidental change, the diagram also brings out some important differences—including the different types of matter, form, and compound involved in each. Thus, the matter that survives or endures a substantial change is *prime matter*; the forms with respect to which such matter changes are *substantial forms* (such as zygotehood and humanity); and the compounds thereby generated and corrupted are *material substances* (such as a zygote or Socrates). By contrast, the matter that survives or endures an accidental change is *secondary matter* or a *substance* (such as Socrates); the forms with respect to which such matter changes are *accidents* (such as brownness and whiteness); and the compounds thereby generated and corrupted are *accidental unities* (such as tan-Socrates or white-Socrates). Finally, we can see from the diagram that, in addition to primarily characterizing the wholes of which they are the constituents, the forms involved in accidental (but not substantial) change also *derivatively characterize* the matter in which they inhere.

This brief summary succeeds, I think, in highlighting all the main features of Aquinas's hylomorphism—at least as that doctrine emerges in the context of his views about change. The need for this last qualification, however, calls our attention to a further issue that must be addressed—namely, how Aquinas's development of hylomorphism in the context of change is related to his development of the same doctrine in other contexts, most notably his metaphysical works. As we shall see, this further issue introduces a complication associated with Aquinas's understanding of the division of the sciences.

## 5.2 Functional Hylomorphism in Physics vs. Metaphysics

If you were to ask a philosopher today, “To which branch or subdiscipline of philosophy do discussions about the nature of change belong, where such discussions include the sort of hylomorphism we’ve been investigating here?” the answer would invariably be “metaphysics”. For Aquinas, however, this is not the case. As he divides theoretical sciences or disciplines—and his divisions are much sharper than our own—the study of change belongs to Natural Philosophy or Physics rather than

Metaphysics.<sup>2</sup> Indeed, as he suggests in the introduction to his commentary on Aristotle's *Physics*, this is an almost trivial consequence of the meaning of 'Natural Philosophy' (*philosophia naturalis*):

The subject of Natural Philosophy is that which is capable of undergoing change (*ens mobile*). The reason for this is as follows. Natural Philosophy deals with natural things (*naturalibus*). But those things are natural which have a nature (*natura*) as a principle, and a nature is a principle of change (or rest) of the thing that has it. Hence, Natural Science deals with those things which have in them a principle of change (*principium motus*). (*In Phys.* 1.1.3)

For Aquinas, the difference between Physics (or Natural Philosophy) and Metaphysics can be said to reside in this: the former studies the principles of change (or becoming)—or as Aquinas puts it in the passage just quoted, the sort of being capable of undergoing change (*ens mobile*)—whereas Metaphysics studies the principles of being as such (*ens inquantum est ens*).<sup>3</sup>

Although Physics and Metaphysics are separate disciplines for Aquinas, and the study of change strictly belongs to the former, there is considerable overlap with respect to the subject matter of both of these disciplines. As we saw in Chapter 3 (§3.4), in order to explain how matter and form differ from privation as principles of change, Aquinas says that matter and form must also be regarded as principles of being. The point of this contrast, moreover, is perfectly straightforward. Matter, form, and privation are all three necessary for explaining how things change *over time*, but only matter and form are necessary for explaining the metaphysical make-up or structure of these same things *at a given time*.

There is a respect, therefore, in which Aquinas thinks that the study of Physics, qua Physics, encroaches on the subject matter of Metaphysics. Indeed, we might even say that, in this respect, Physics helps to provide Metaphysics with its subject matter. For apart from the study of change, the hylomorphic structure of objects might never have occurred to us, much less have been comprehensible. No doubt, this is part of what Aquinas has in mind when he suggests at a certain point in his commentary on Aristotle's *Metaphysics* that "matter"—and presumably also form and compound—"cannot be fully understood in itself apart from change".<sup>4</sup>

But even if the study of matter and form in Physics is, in one respect, epistemically prior to their study in Metaphysics, a little reflection reveals that there is another, more fundamental respect in which the priority of study is reversed. In fact, if we

<sup>2</sup> I use a capital letter to mark the distinction between Aquinas's division of the sciences and our own.

<sup>3</sup> When Aquinas says that Metaphysics studies the principles of being as such, I take him to mean that it aims to specify the properties or features that beings exhibit insofar as they are beings or existents (as opposed, say, to the properties or features that they exhibit insofar as they are capable of changing). For a helpful introduction to Aquinas's division of the sciences in general, and his conception of Metaphysics in particular, see Wippel 2000, 3–22.

<sup>4</sup> *In Meta.* 7.2.1285. In the particular case of matter, however, he presumably also has something further in mind—namely, that change tells us something distinctive about its nature. See again the portion of *In Meta.* 7.2.1285 quoted in §4.2.

think about the difference between the conception of matter and form as “principles of being” and their conception as “principles of becoming (or change)”, we can see that Metaphysics is the discipline that really provides us with Aquinas’s hylomorphism *tout court*.

Recall what we said about the sort of hylomorphism that emerges from Aquinas’s general account of change—what I referred to as his *functional hylomorphism* because it characterizes the central hylomorphic notions in terms of certain functional roles associated with change (§3.3). Such hylomorphism, as we can now see, reflects Aquinas’s conception of matter and form as principles of becoming. If we take into account some of the further details that emerge from his specific account of substantial vs. accidental change, we can describe his functional hylomorphism more perspicuously as follows:

#### Functional Hylomorphism in Physics

- *Matter* =<sub>def</sub> A being (whatever it is in itself) that can have different forms inhering in it over time.
- *Form* =<sub>def</sub> A being (whatever it is in itself) that can inhere in matter over time.
- *Compound* =<sub>def</sub> A complex being (whatever it is in itself) that exists in virtue of the inherence of some form in matter.

Note that I speak here of Aquinas’s “functional hylomorphism *in Physics*” rather than simply of his “functional hylomorphism” (as I did in Chapter 3). This is precisely to bring out something that was earlier left implicit—that in this context the notions of matter and form must be relativized to change or becoming. So understood, matter is not merely something capable of having forms inhere in it *simpliciter*; it is something capable of having forms inhere in it *over time*. Likewise, a form is not merely something capable of inhering in matter *simpliciter*; rather, it is something capable of inhering in matter *over time*. Note, however, that by relativizing the notions of matter and form in this way, Aquinas’s functional hylomorphism in Physics would seem to go beyond that of his Metaphysics. For the conception of matter and form as “principles of being” would not appear to take any stand on their function over time. Hence, if we want to make clear how Aquinas’s central hylomorphic notions are to be understood in the context of his Metaphysics, we must re-describe his functional hylomorphism as follows:

#### Functional Hylomorphism in Metaphysics

- *Matter* =<sub>def</sub> A being (whatever it is in itself) that can have a form inhering in it.
- *Form* =<sub>def</sub> A being (whatever it is in itself) that can inhere in matter.
- *Compound* =<sub>def</sub> A complex being (whatever it is in itself) that exists in virtue of the inherence of some form in matter.

If we compare the two sorts of hylomorphism just described—or better, the different sorts of functional characterization included in them—we can see that Aquinas's functional hylomorphism in *Metaphysics* is the one that is more explanatorily basic or fundamental. For anything that can have forms inhering in it *over time*, must also be such that it can have forms inhering in it *simpliciter*. But the reverse is not necessarily true. Indeed, Aquinas's functional hylomorphism in *Metaphysics* opens up a possibility that is strictly ruled out by his functional hylomorphism in *Physics*. Within the framework provided by *Metaphysics*, there is nothing to prevent an object from having a type of matter that is incapable of acquiring or losing forms—and hence nothing to prevent the existence of a hylomorphic compound that is incapable of being generated or corrupted. Within the framework provided by *Physics*, however, the very idea of such an object is incoherent or absurd. For unlike “metaphysical” matter, “physical” matter is *by definition* such that distinct forms can inhere in it over time; hence, any object composed of it must thereby be capable of generation or corruption.<sup>5</sup> Recognizing that there is a functional characterization of matter in *Metaphysics* as well as *Physics* turns out to be important for appreciating an aspect of Aquinas's views that commentators have often struggled to understand—namely, his insistence that heavenly bodies are incapable of undergoing substantial change, despite their being composed of prime matter and substantial form.<sup>6</sup>

What all of this shows is that Aquinas's theory of change can be used to clarify not only the sort of functional hylomorphism proper to his *Physics*, but also that which is proper to his *Metaphysics*. Because of the epistemic priority of his “physical” hylomorphism, Aquinas recurs to it continually in the development of his full-blown metaphysical views. Even so, because of explanatory priority of his “metaphysical” hylomorphism, it is the one that provides us with the most complete statement of his functional hylomorphism—indeed, with what we might think of as his functional hylomorphism *tout court*.

### 5.3 Complete Hylomorphism

Up until now, we have been focusing on the functional roles that Aquinas assigns to matter, form, and change. It is time we shifted our focus from such roles to the specific ontological types or categories of being that play them. That is to say, it is time we shifted our focus from Aquinas's functional hylomorphism to what we might think of as his *complete* (or *full-blown*) *hylomorphism*.

<sup>5</sup> I add scare quotes around ‘physical’ and ‘metaphysical’ here (and in the next paragraph) because, as we have seen, even the Physicist qua Physicist can make use of the “metaphysical” framework, and presumably the Metaphysician qua Metaphysician can also make use of the “physical” one.

<sup>6</sup> See Wippel 1981, esp. 272–91, for evidence that commentators have had difficulties with this aspect of Aquinas's views since at least the late 13th century. I will return to Aquinas's views about heavenly bodies in §9.1.



Although matter, form, and compound could, in principle, be identified with any type of being capable of playing the relevant functional roles, we have seen that Aquinas wants to identify them, at least in some cases, with *concrete particulars* (or better, *substances*), *immanent properties*, and *complexes* (or *concrete states of affairs*). Thus, in the example of the accidental change by which Socrates goes from being tan to white, Socrates himself plays the role of matter, his colors play the role of forms, and complexes involving both Socrates and his colors play the role of compounds. Likewise, in the example of the accidental change by which a statue is produced from a lump of bronze, the lump of bronze plays the role of matter, its shapes play the role of forms, and complexes involving both the lump and its shapes play the role of compounds. In light of these examples, we might try to represent Aquinas's complete hylomorphism as indicated in Fig. 5.2.

In the context of change, I typically rely on diagrams that place matter and form within the compounds of which they are a part, with the form being located directly above the matter in which it inheres. (See again Fig. 5.1.) Outside the context of change, however, it is often more useful to represent Aquinas's hylomorphism as I have in Fig. 5.2—that is, in terms of diagrams that place matter and form side by side, with the compounds of which they are a part being located directly above them.<sup>7</sup>

While the diagram at Fig. 5.2 goes some distance toward clarifying Aquinas's full-blown hylomorphism, it does not succeed in capturing all the nuances of his complete views. For although it fits well with his assignment of the functional roles associated with matter, form, and compound in cases of accidental change, it does not fit well with their assignment in cases of substantial change. More specifically, it fails to take into account the following three things: (1) that what plays the role of matter in cases of substantial change is prime matter, which is not a substance but a being of a *sui generis* type; (2) that there are different types of form or property corresponding to the different types of matter for change; and (3) that there are different types of complex composed of these two different types of matter and form. Once we take these three things into account, however, we can represent

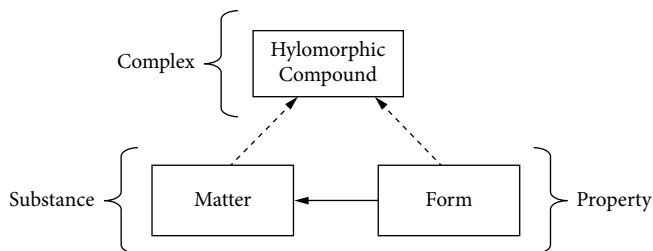


Figure 5.2 Complete Hylomorphism—A First Approximation

<sup>7</sup> As always, I employ a solid arrow to represent inherence and dotted arrows to represent composition.

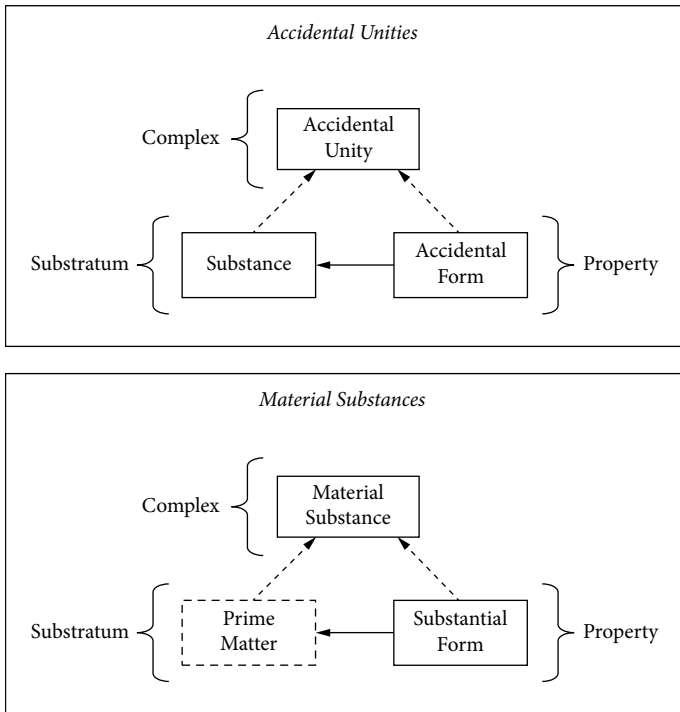


Figure 5.3 Complete Hylomorphism—A Better Approximation

Aquinas's complete hylomorphism in a way that improves on our initial approximation (see Fig. 5.3).<sup>8</sup>

This diagram does a much better job of representing Aquinas's complete hylomorphism than our "first approximation". But insofar as it leaves open the precise nature of prime matter, even it cannot be said to provide a complete representation of Aquinas's views. I will return to the proper understanding of Aquinas's views about prime matter shortly. But first, I want to briefly touch on a few aspects of Aquinas's hylomorphism that have heretofore remained in the background but which this new diagram serves to highlight.

First, as the diagram itself suggests, the distinction between substantial and accidental forms is one that should be understood as relative to substances. That is to say, it is a distinction having to do with the different ways in which these two types of forms or properties are possessed by them. Thus, accidental forms are possessed by substances *via inherence* (since they are properties inhering directly in substances),

<sup>8</sup> This diagram follows the same conventions as the previous one, but also adds dotted lines to the box surrounding prime matter in order to indicate its special ontological status.

whereas substantial forms are possessed by substances *via constituency* (since they are properties inhering directly in their prime matter).

Second, this understanding of the distinction between substantial and accidental forms—in terms of their different manner of possession—helps to explain some further roles that Aquinas thinks of forms playing with respect to substances. Substantial forms are forms or properties that (together with the prime matter in which they inhere) determine the nature or essence of their host substances. All material substances, Aquinas thinks, are composed of prime matter.<sup>9</sup> But different types of material substance have different types of substantial form. Thus, a human being (such as Socrates) has one type of substantial form—what I have been calling *humanity*—whereas a horse (such as Bucephalus) has another type—what we might call *equinity*.

As this last point makes clear, substantial forms bear a complicated relationship to the nature or essence of material substances. Aquinas often expresses this relationship by saying that substantial forms are parts of such natures or essences. Thus, the substantial form of a human being is part of human nature, just as the substantial form of a horse is part of equine nature—where these natures or essences are themselves to be understood as including both matter and form.<sup>10</sup> In short, for something to qualify as a human being or a horse, for Aquinas, it must not only possess the right sort of substantial form, but also some portion or other of prime matter.<sup>11</sup>

Somewhat confusingly, though in keeping with standard medieval practice, Aquinas often uses the term ‘form’ (*forma*) to refer not only to substantial forms but also to the natures or essences of which they and their prime matter are a part. In the context of natures or essences, therefore, even form can have matter. Recognizing the potential for confusion or ambiguity here, he distinguishes these two uses by referring to substantial forms as ‘the form of the part’ (*forma partis*) and to natures or essences as ‘the form of the whole’ (*formae totius*).<sup>12</sup>

<sup>9</sup> Indeed, as we shall eventually see (§8.3), it is in virtue of possessing prime matter that a substance qualifies as material. For concerns about whether heavenly bodies are composed of prime matter, see §9.1.

<sup>10</sup> In order to emphasize that the natures or essences of material substances include both matter and form, Aquinas will sometimes refer to the latter as *essential parts*. See, e.g., *ST* 1.8.2 ad 3 and 76.8.

<sup>11</sup> See in particular *DEE* 2, where Aquinas argues in detail that the nature or essence of a material substance must be understood in terms of both matter and form. That the type of matter Aquinas has in mind in this context is prime matter is clear from his description of it as incapable of being cognized on its own. Aquinas sometimes speaks of the essence of material substances as including sensible matter, such as flesh and bones, which is capable of being cognized. See, e.g., *In Meta.* 7.9.1469. But if what I have said about integral parts is correct (see again §1.2), such matter reduces to the possession of prime matter and the relevant sort of substantial form.

I will have more to say about the relationship between matter, form, and essence in §§9.1–2. For further texts and discussion, see Wippel 2000, 328–33. See also Mauer 1951 for evidence that Aquinas departs from Aristotle’s own understanding of essence in insisting that it includes prime matter as well as substantial form.

<sup>12</sup> See again the texts and references cited in the previous note, esp. *In Meta.* 7.9. As mentioned in Ch. 4, Aquinas often uses abstract kind terms such as ‘humanity’ for natures or essences, and hence to refer to a form of the whole, whereas I have been using them (for the reasons given in §4.1, n. 6) for substantial forms, and hence to refer to a form of the part.

Finally, a few words about accidental forms are in order. By contrast with substantial forms, which contribute to the nature or essence of material substances, accidental forms determine certain of their further characteristics or features. As we have seen (§4.4), the precise way in which accidental forms determine these further characteristics is somewhat complicated for Aquinas. Unlike substantial forms, which characterize substances *primarily* or *simpliciter* (in virtue of being constituents of them), accidental forms characterize them *secondarily* or *derivatively* (in virtue of being constituents of things that share the same matter as these substances). In this context, it is perhaps worth emphasizing again a point made earlier—namely, that although the characteristics determined by accidental forms fall outside of the nature or essence of substances, and hence can be thought of as non-essential properties of substances, we must be careful not to conflate Aquinas's distinction between substantial and accidental forms with the contemporary distinction between essential and contingent properties. For even if all substantial forms are essential (in the sense of being non-contingent properties of substances), it is not true that all accidental forms are contingent properties. On the contrary, like most other medieval Aristotelians, Aquinas insists that there is a class of accidents which are possessed by substances non-contingently—the so-called *propria* or necessary accidents.<sup>13</sup>

## 5.4 Metaphysics of Prime Matter I—Atomless Gunk

With the exception of Aquinas's views about prime matter, we now have before us all the main elements of his complete hylomorphism. But how are we to understand prime matter itself? As is well known, Aquinas's views on this score are notoriously obscure and raise a host of interpretive questions. Because of the difficulties here, it will be useful to approach his views in two stages. In the remainder of this section, I will focus on providing a general framework for understanding Aquinas's conception of prime matter, one that would have been accepted by many, if not most, of his contemporaries. Then, in the next section, I will turn to the details of Aquinas's more specific conception of prime matter, and in particular attempt to say something illuminating about the precise ontological category to which Thomistic prime matter belongs.

To begin, let us consider two assumptions that Aquinas makes in the context of change, each of which tells us something important about the nature of prime matter. The first assumption is that prime matter is a type of being that can be *re-identified over time*—at least in the sense that we can make true claims of the form '*a*'s prime matter at  $t_1$  is identical to *b*'s prime matter at  $t_2$ '. The possibility of such re-identification follows directly from the role that Aquinas assigns to prime matter in substantial change—a role that requires us to say, for example, that Socrates's prime matter is

<sup>13</sup> See Ch. 13 (esp. §§13.3–4) for complications regarding the assumption that even substantial forms are essential (in the sense of being non-contingent properties of substances).

identical to that of the zygote from which he is generated (see again the diagram at Fig. 5.1). But this same possibility also seems to be required by ordinary cases of accidental change. For presumably the prime matter associated with Socrates prior to his change of color is (or at least could be) identical to that associated with Socrates after his change. And likewise for the prime matter associated with the lump of bronze in Aquinas's other example of accidental change.

This first assumption highlights the fact that distinct portions of prime matter have a kind of intrinsic unity for Aquinas—indeed, a kind of *numerical unity*. In order to re-identify Socrates's prime matter over time, we must be able to count it as *one*, both at a given time and over time. The same is true for the prime matter associated with our lump of bronze (or, indeed, any other material substance). Note, however, that insofar as a given portion of prime matter can be counted as one, it would also appear to have a kind of intrinsic distinctness from every other such portion. For in order to re-identify Socrates's prime matter *as opposed to* that associated with some other material substance (say, our lump of bronze), it must be a portion *distinct* from that other (and, indeed, from all other portions).

This first assumption, and in particular what it implies about the unity and distinctness of portions of prime matter, fits well with what we've seen of Aquinas's views about numerical sameness. Indeed, it allows us to fill out some of our previous remarks on this score. Consider again a passage quoted previously:

Those things are one in number whose matter is one . . . Indeed, it is on account of matter that a singular thing is both one in number and divided from other things. (*In Meta.* 5.8.876)

In Chapter 4 (§4.4) we noted that this passage provides support for the doctrine of numerical sameness without identity—at least when taken together with Aquinas's views about change. For these views commit Aquinas to the existence of distinct things sharing the same matter (e.g., Socrates and white-Socrates). But as we are told in this passage, things sharing the same matter are “one in number”.

As we can now see, however, there is more going on in this passage than we previously noted. Aquinas doesn't merely say that things sharing the same matter are one in number, but rather that “those things are one in number whose matter is *one*”. But this in turn requires that the matter shared by distinct things itself has a kind of intrinsic unity. What is more, Aquinas seems to be taking for granted here that such unity brings with it a kind of intrinsic distinctness. Indeed, when he goes on to assert that “it is on account of matter that a singular thing is both one in number and divided from other things”, he appears to be making two claims: (1) that the *unity* of a given portion of matter explains the numerical sameness of its shared possessors (at a time), and (2) that the *distinctness* of this same portion from all others explains the distinctness of its shared possessors from all others (at that time).<sup>14</sup> It is worth noting

<sup>14</sup> Again, the reference to time (though not explicit here) is necessary, since Aquinas's views about change require that numerically distinct things can share the same matter over time. See again §4.4, esp. the clarifications in n. 38.

that this last claim fits particularly well with Aquinas's repeated insistence, in the context of his views about individuation, that distinct substances of the same species must ultimately trace their distinction to the distinctness of their matter.<sup>15</sup>

So much for Aquinas's assumption about the re-identifiability of prime matter and its implications. Let us now turn to a second assumption that Aquinas makes in the context of change—namely, that prime matter is a type of being that can be *compounded and divided*.

As I'm using the terms, to say that prime matter can be compounded is just to say that distinct portions of it can be combined to form larger portions. Likewise, to say that prime matter can be divided is just to say that a single portion can be separated into distinct portions each of which is smaller than the original, and hence a proper subportion of it. As indicated previously (§3.2), the possibility of such compounding and dividing is precisely what enables Aquinas to distinguish one-one changes from those that are many-one or one-many. To see why, consider again Aquinas's statue example. On our original way of filling out the example, the statue is generated from a single bronze sphere. Even so, we could just as easily imagine the statue being generated from several smaller spheres—in which case its prime matter would have been the sum of the prime matter of each of the smaller spheres. Likewise, once the statue is generated, we could easily imagine it being melted down and recast as several smaller spheres—in which case the prime matter of each of the smaller spheres would be a proper part of that of the statue. In cases of the latter sort, we continue to re-identify prime matter over time, but the sorts of identity claims that we are led to make are not of the form '*a*'s prime matter at  $t_1$  is identical to *b*'s prime matter at  $t_2$ '. Rather, they are of the form '*a*'s prime matter at  $t_1$  is identical to the sum of *b*'s and *c*'s at  $t_2$ '.

Evidently, therefore, just as Aquinas's assumption about the re-identifiability of prime matter requires distinct portions to possess a kind of intrinsic unity and distinctness, so too his assumption about its capacity for being compounded and divided requires such portions to enter into various part-whole relations. For insofar as any portion of prime matter can be divided, it must be composed of distinct proper parts or subportions into which it can be divided; and insofar as any distinct portions can be compounded, they must be capable of being part of a larger portion having them as distinct subportions.

Aquinas is often at pains to emphasize that prime matter is not itself composed of matter and form. Indeed, as indicated previously (§4.2), it is precisely prime matter's lack of composition in this regard that makes it *prime* matter. As we can now see, however, this should not be taken to imply that prime matter lacks compositional structure altogether. On the contrary, Aquinas's assumption about compounding and dividing appears to commit him to the existence of arbitrary sums of prime

<sup>15</sup> For a particularly clear text, see *In CA* 9. See also Brower 2012b and Wippel 2000, §9.4 for further texts and discussion.

matter—that is to say, to the view that whenever two (or more) portions of prime matter exist, regardless of how widely scattered they are across time or place, there is a further portion of prime matter composed of each.

To see why, let us return once again to our statue example and suppose that this time the statue really is melted down and recast as two smaller spheres. For the sake of clarity, I shall refer to the statue as *a*, and the smaller spheres produced from it as *b* and *c*. As we have seen, Aquinas's understanding of this sort of example commits him to saying that '*a*'s prime matter at *t*<sub>1</sub> is identical to the sum of *b*'s prime matter and *c*'s prime matter at *t*<sub>2</sub>'. But the truth of such a claim would, in turn, seem to imply the existence of a sum of prime matter that is scattered across times and places. For insofar as *a*, *b*, and *c* themselves occupy different times and places, the same would appear to be true of their constituent prime matter. What is more, in order to explain how the matter of our two smaller spheres could be compounded at some later time to form that of a larger single sphere—say, *d*—it appears that we must also assume that there is a sum composed of their matter, regardless of their spatial separation. Taking all this into account, as well as the fact that Aquinas places no restriction on the way in which prime matter can be either compounded or divided, it would seem to follow that the mere existence of two (or more) distinct portions of prime matter is sufficient for the existence of their sum, no matter how arbitrary such a sum appears to be. In short, Aquinas's views about prime matter would seem to commit him to a form of universalism:

**Universalism about Portions of Prime Matter**

For any distinct, non-overlapping portions of prime matter, the *xs*, there exists a further portion of prime matter, *y*, which is a sum composed of the *xs*.

If I am right to say that Aquinas's views about prime matter commit him to this form of universalism, then we can make sense of an extremely puzzling passage that occurs near the end of his discussion of change in *De principiis*. Here Aquinas famously remarks:

It must be known that prime matter is said to be numerically one in all things. But something is said to be numerically one in either of two ways. First, it is said to be numerically one if it has a determinate form (as in the case of Socrates, for example). This is not the way in which prime matter is said to be one in number, since it doesn't have any form in itself. Second, something is said to be numerically one if it lacks the dispositions that make things differ according to number. This is the way in which prime matter is said to be one in number, since it must be understood as lacking all the dispositions which give rise to a difference in number. (*DPN* 2.97–108)

On the face of it, this passage appears to be inconsistent with my claim that prime matter comes in distinct portions, each with its own intrinsic unity. For when

Aquinas speaks here of prime matter as “numerically one in all things”, on the grounds that it lacks determinate form and hence the dispositions that give rise to “difference in number”, it is natural to interpret him as identifying the prime matter of each and every material substance (so that Socrates’s prime matter is identical to Plato’s, which in turn is identical to Bucephalus’s, and so on). On this interpretation, prime matter will still possess a kind of unity, but it will be more like that associated with a universal than an individual. Indeed, on this interpretation, we might say that there is ultimately just one portion of prime matter—that is, a single portion that is numerically one in the sense that it is a constituent of all material substances, and hence multiply located and filling the places occupied by each of these substances.

This interpretation of prime matter is sometimes attributed to Aquinas, and may well be the one preferred by certain later Thomists.<sup>16</sup> But it is clearly inconsistent with what we’ve seen of Aquinas’s views about change and numerical sameness. For if prime matter were numerically one in the sense required by this reading, then there would be single substratum involved in every substantial change, and hence it would be impossible to make sense of Aquinas’s views about one–many or many–one substantial changes. What is worse, all material substances would completely overlap with respect to this same substratum, and hence would themselves qualify as one and the same material object. In short, if this interpretation were correct, it would imply that there is ultimately just one material object precisely because there is just one portion of prime matter. Not only does this implication seem absurd in itself, but it is difficult, if not impossible, to reconcile with what we’ve seen of Aquinas’s views about the role of matter in individuation—including in particular his claim that “it is on account of matter that a singular thing is both one in number *and divided from* other things” (*In Meta.* 5.8.876).

It is, of course, possible that Aquinas’s views about prime matter are simply inconsistent. But it is important to see that there is nothing that forces this interpretation on us. When Aquinas asserts the numerical oneness of prime matter “in all things”, this could be interpreted as an identity claim—that is, as the claim that the prime matter associated with each and every material substance is *identical*. But it could also be interpreted as a claim about composition rather than identity—that is, as the claim that there exists a single sum or portion of prime matter *composed of* all the distinct, smaller portions existing in the world. On this compositional interpretation, Aquinas’s remarks about the lack of determinate form in prime matter can be seen as providing an explanation for why such a portion must exist in the first place. Because prime matter does not possess any determinate form in itself, it lacks the

<sup>16</sup> See Pasnau 2011, §4.1 for the attribution of this reading to Aquinas and certain later Thomists. It is not clear how this attribution is supposed to fit with Pasnau’s preferred anti-realist interpretation of Aquinas’s views about prime matter (Pasnau 2011, 37, n. 2 and 2002, 131–40). See §5.5, this volume, for further discussion of Pasnau’s anti-realist interpretation.



“dispositions” that would prevent the existence of arbitrary sums of prime matter, and hence the existence of a single portion that includes all others. What is more, this interpretation avoids the obvious absurdities associated with the identity interpretation. For although it does require the postulation of a single “giant” scattered sum of prime matter, it does not require this sum to serve as a substratum for any form or property or to enter into any larger hylomorphic compound as a constituent part. For the same reason, there is no danger of this sum’s being the only substratum for substantial change, much less something with respect to which all material substances completely overlap.

In the end, I think this compositional interpretation is precisely the one we should expect, given Aquinas’s universalism about portions of prime matter. In any case, because it is the only one that appears to be consistent with the other things that he says about prime matter, it is the one that I shall adopt in what follows.

So far I have been exploring the implication of certain assumptions that Aquinas makes about prime matter in the context of change—namely, its re-identifiability and its ability to be compounded or divided. In addition to these two assumptions, however, there are two more that I want to mention briefly—though these further assumptions are more closely connected with Aquinas’s views about continua than change. The first is that prime matter is not only divisible, but *infinitely divisible*. This assumption is, in fact, implicit in what we’ve already seen of his views about change—namely, that there are no restrictions on the way in which prime matter can be compounded or divided. But it is also directly implied by his view that material substances are continuous objects and that there is, in principle, no limit on the number of divisions continua can undergo.<sup>17</sup> The other assumption is that prime matter is *atomless*. Infinite divisibility does not by itself exclude the existence of mereological atoms or indivisible portions of prime matter. Lines, for example, are infinitely divisible, but ultimately composed of indivisible points. And something similar could, in principle, be said of prime matter. As it turns out, however, Aquinas follows Aristotle in rejecting all forms of atomism. For the same reason, he is committed to the view that prime matter, like all other continua, is not composed of any indivisibles.<sup>18</sup>

We can summarize our discussion up to this point by saying that Aquinas’s views about change and continua lead him to make the following four assumptions about prime matter:

<sup>17</sup> See, e.g., *ST* 1.3.1: “Every body is in potentiality, because a continuous object, as such, is infinitely divisible.” See also *ST* 1.7.1, 3 and *In Phys.* 3.1.277.

<sup>18</sup> In this respect, Aquinas is like most other medieval philosophers prior to the 14th century. For historical background and references, see Murdoch 1982a and 1982b, and more recently Grellard and Robert 2009. For relevant philosophical context, and in particular questions about the defensibility of these two assumptions, see Pyle 1997 and Zimmerman 1996a.

#### Four Assumptions about Prime Matter

- (1) It can be *re-identified* over time (i.e., we can make true claims of the form 'a's prime matter at  $t_1$  is identical to b's at  $t_2$ ');;
- (2) It can be *compounded and divided* (i.e., we can make true claims of the form 'a's prime matter at  $t_1$  is identical to the sum of b's and c's at  $t_2$ ');;
- (3) It is *infinitely divisible* (i.e., there is no limit, in principle, on the number of divisions prime matter is capable of undergoing);
- (4) It is *atomless* (i.e., like all other continua, prime matter is not composed of indivisibles).

In light of these assumptions, I suggest that prime matter for Aquinas is best conceived of in terms of what philosophers nowadays call 'atomless gunk'—that is to say, a type of being not only having parts, but also such that each of its parts has proper parts.<sup>19</sup>

## 5.5 Metaphysics of Prime Matter

### II—Non-Individual Stuff

What I've said about Aquinas's conception of prime matter so far would, I think, have been accepted by many, if not most, late medieval philosophers, including Scotus and Ockham.<sup>20</sup> But Aquinas famously adds to this general medieval conception the claim that prime matter must also be understood as "pure potentiality" (*potentia pura*), or as "a being that exists only in potentiality" (*ens potentia tantum*). What are we to make of this addition?<sup>21</sup>

<sup>19</sup> The phrase 'atomless gunk' was coined by David Lewis (1991, 20). Since the occurrence of the term 'atomless' in this phrase is pleonastic, I will often drop it in what follows.

If I am right about Aquinas's commitment to the assumptions at (1)–(4), then prime matter has an actually infinite number of proper parts. This appears to be in tension with Aquinas's view, shared by medieval philosophers in general, that there are no actual infinities in nature. As far as I'm aware, Aquinas never explicitly addresses this tension. It may be, however, that this is because the tension is merely apparent. As we'll see in the next section, Aquinas regards prime matter as a type of being in pure potentiality. Insofar as it lacks actuality, therefore, it may be that its having an infinite number of proper parts does not constitute an actual infinity of the sort to which he objects—that is, an infinite number of beings in actuality. If this is right, then we must distinguish two different sorts of potential part. On the one hand, there are integral parts of substances, which on my interpretation are potential parts in a purely deflationary sense (see again the discussion in §1.2). On the other hand, there are the parts of prime matter, which are potential in a non-deflationary or ontologically significant sense (namely, they are parts of a *sui generis* type of being that possess actuality only via inheritance).

<sup>20</sup> Though beginning in the 14th century, philosophers began to depart from at least certain aspects of this conception of prime matter—in particular, the fourth assumption concerning its atomlessness. See again the references cited in n. 18, this chapter.

<sup>21</sup> For some classic discussions, see Forest 1931 and Weisheipl 1965.

In the context of change, we have seen that Aquinas associates potentiality with the capacity to take on distinct forms over time (§3.3). It might be thought, therefore, that when Aquinas describes prime matter as “pure potentiality,” this merely indicates that prime matter can, in principle, be combined with any (substantial) form whatsoever, and hence be a part of any type of material substance or body. And indeed many other medieval philosophers were prepared to allow that prime matter qualifies as “pure potentiality” in this merely functional sense. But this cannot be Aquinas’s own understanding of the description in question. For, as noted earlier (§5.2), Aquinas allows for cases in which the prime matter of certain objects (namely, the heavenly bodies) is incapable of taking on distinct substantial forms over time.<sup>22</sup>

To appreciate the intended meaning of Aquinas’s description, we must see that “pure potentiality” has another, more robust (or non-functional) sense—one connected with the way in which prime matter possesses being or actuality. In Chapter 4 (§4.2) we saw that prime matter differs from other sorts of matter, for Aquinas, insofar as it is not composed of any form. For the same reason, it cannot be said to possess any being or actuality, except through some form inhering in it. This is the sense in which Aquinas thinks prime matter exists only in potentiality. To cite one further text in this connection:

Prime matter can never exist through itself (*per se*). Indeed, since it does not have any form by its nature, it does not have being in actuality, but only in potentiality (*est solum in potentia*), since being in actuality comes only through a form. For the same reason, nothing that exists in actuality can be called *prime matter*. (DPN 2.114–119)

When Aquinas describes prime matter as “pure potentiality” or as “a being only in potentiality”, it is clear that he always has this more robust sense of the description in mind. Indeed, he almost always qualifies the description in such a way as to make this clear. To take just one particularly clear example from the *Summa Theologiae*:

Because prime matter is not a being in actuality (*ens in actu*), but merely in potentiality (*potentia tantum*), it does not exist in reality through itself (*per seipsam*). (ST 1.7.2 ad 3)

It is also this more robust understanding of “pure potentiality” that enables Aquinas to insist that not even God could create prime matter in the absence of any forms or properties, since prime matter, so understood, can have no being or actuality apart from a form or property.<sup>23</sup>

The description of prime matter as “pure potentiality” has always been a source of difficulty for Aquinas’s commentators. Many of his near-contemporaries, such as Scotus and Ockham, and even some of his later followers, such as Suarez, explicitly reject it as incoherent. Everything that exists, they say, has some actuality of its own;

<sup>22</sup> For more on the matter of heavenly bodies, see §9.1.

<sup>23</sup> See esp. *Quod.* 3.1.1. For further passages and discussion of the historical context, see Wippel 2000, esp. 312–27.

but insofar as prime matter serves as the enduring substratum for change, it too must exist and hence be actual of itself. But, then, if prime matter has some actuality of its own, why couldn't God create it apart from any forms or compounds? It could still be granted, as Scotus, Ockham, and Suarez all do, that such matter is incapable of *naturally* existing apart from any forms or compounds; even so, this doesn't rule out the possibility of its existing independently *by the absolute power of God*.<sup>24</sup>

Nowadays commentators are, perhaps, more reluctant than Aquinas's own contemporaries to charge him with incoherence. But it is not always clear that their interpretations are any more charitable. Indeed, on the interpretation preferred by a number of our contemporaries, Aquinas is a kind of anti-realist about prime matter. That is to say, prime matter is for him merely "a conceptual tool" (Konyndyk et al. 2009, 19); "a theoretical terminus of form-matter analysis rather than an actual component of nature" (Kretzmann 1999, 212); or "just a logical abstraction... a conceptual part of material objects" (Pasnau 2002, 131). Robert Pasnau draws out what appears to be the implication of this anti-realist interpretation of prime matter:

Material beings are not composites of actuality plus some kind of elusive stuff known as matter, they are instead just composites of certain sorts of actuality. Reality is actuality all the way down, and substances are bundles of actuality, unified by organization around a substantial form. (Pasnau 2002, 131)

If there is no prime matter, then material substances cannot literally be composed of matter and form. Insofar as they are complex, therefore, they must be conceived of as "bundles" of form or actuality.

While this anti-realist interpretation has the advantage of side-stepping questions about what Aquinas takes to be the nature or ontological status of prime matter, it is clearly inconsistent with his account of change as generation and corruption. For, as we have seen (§3.1), the latter requires an enduring substratum, distinct from all forms or properties, as "part of the very concept of change".<sup>25</sup> For the same reason, I think there can be no escaping the conclusion that his material substances are "composites of actuality plus some kind of elusive stuff known as matter". In short, Aquinas's hylomorphism is a type of substratum theory, not bundle theory.<sup>26</sup>

<sup>24</sup> For Scotus and Ockham on prime matter, see Adams 1987, vol. 2, 639–47 and Wolter 1965. For Suarez, see Des Chene 1996, 126. For a number of other philosophers of Aquinas's time who insisted that prime matter must be said to have actuality of itself, and hence shared the conviction that prime matter could, at least in principle, exist apart from any forms or compounds, see the discussion (and references) in Wippel 2000, 312–13.

<sup>25</sup> See again *ST* 1.45.2 ad 2 and the other passages cited in §3.1. As we shall see later (§§11.1–2), Aquinas's claim about the concept of change will have to be modified in light of the fact that he allows for a type of supernatural change without an enduring substratum (namely, transubstantiation). But far from undermining the motivation for prime matter, this complication reinforces it, showing that in all types of change except one, such a substratum is required.

<sup>26</sup> See Ch. 6 for further development and defense of this claim.

There are, of course, commentators who recognize all this, and hence interpret Aquinas as a realist about prime matter—indeed, as a realist about distinct portions of prime matter.<sup>27</sup> But as far as I can tell, these commentators have yet to make clear the precise ontological type or category to which prime matter belongs. Indeed, they typically have little or nothing to say about this. In what follows, therefore, I shall attempt to advance the realist cause by offering an interpretation that fills this gap.

As we have seen, what appears to threaten the coherence of Aquinas's conception of prime matter is his claim that prime matter lacks actuality of or through itself (*per seipsam*).<sup>28</sup> For like other medieval philosophers, Aquinas thinks there is a close connection between being (or existence) and actuality:

The term 'being' (*ens*) properly expresses that something exists in actuality. (*ST* 1.5.1 ad 1)

But given this connection, the description of prime matter as pure potentiality just appears to amount to the claim that prime matter lacks being or existence altogether.

Commentators are right, I think, to emphasize the close connection between being and actuality for Aquinas. But they seem not to have appreciated the equally close connection between individuality and actuality. Admittedly, this is not something that Aquinas often emphasizes. But there is one well-known passage where he makes the connection perfectly explicit:

Two things belong to the notion of an individual—namely, (a) that it is a being in actuality, either in itself or in another (*in se vel in alio*), and (b) that it is a being divided from all other things which are (or can be) in the same species, though it is undivided in itself. (*In Sent.* 4.12.1.1.3 ad 3)

In this passage, Aquinas identifies two conditions on individuality. First, to be an individual something must qualify as a being in actuality—or, more precisely, as a being in actuality *in itself* or *in another*. Second, this same being must belong to a species in such a way that it possesses a kind of unity distinct from other members of the same species.

Initially, it might appear that the satisfaction of these conditions merely requires something to be a distinct member of some natural kind. For a being in actuality just appears to be something that exists, and a species just appears to be a type of natural kind (namely, a specific as opposed to a generic natural kind). If this were all that is required to satisfy the conditions in question, then prime matter might itself appear to qualify as an individual for Aquinas. For, as we have seen, Aquinas is committed to the existence of distinct portions of prime matter, which do not differ with respect to

<sup>27</sup> See, e.g., Brown 2005, Eberl 2004, Lang 1998, Leftow 2001, Stump 2003, and Wipfel 2000.

<sup>28</sup> The Latin '*per se*' is sometimes translated as 'in itself' rather than 'of itself' or 'through itself'. In certain contexts, this less literal translation may well be preferable. See, e.g., Wipfel 2000, 229, n. 12. In the current context, however, this would be misleading, since, as we shall see shortly, Aquinas explicitly introduces the expression 'in itself' (*in se*) to distinguish a specific type of being that has actuality through itself (*per se*).

their nature and so might be said to belong to a single natural kind.<sup>29</sup> But a closer look at these two conditions makes it clear that there is more to their satisfaction than merely being a distinct member of some natural kind.

Consider the first condition. In a broad sense, it is surely true that anything that exists (including prime matter) can be said to qualify as a *being in actuality*. This seems to be a straightforward consequence of Aquinas's realism about prime matter and his views about the connection between being and actuality. To be sure, prime matter cannot be said to have being or actuality *through itself*; even so, insofar as it exists, prime matter must be said to have being or actuality *in some way or other* (namely, *via inherence*).

There is, however, a narrow sense of the phrase in which prime matter cannot be said to qualify as a *being in actuality*. Indeed, if we recall the connections between Aquinas's functional hylomorphism and his understanding of the notions of potentiality and actuality (§3.3), we can see that only compounds qualify as *beings in actuality* in the strict or narrow sense:

#### Functional Hylomorphism, Potentiality, and Actuality

- *Matter* =<sub>def</sub> A being in potentiality.
- *Form* =<sub>def</sub> An actuality.
- *Compound* =<sub>def</sub> A being in actuality.

If we return to Aquinas's first condition with these two senses of 'a being in actuality' in mind (the narrow and the broad sense), we can see that neither of them corresponds exactly to what he has in mind there. For to satisfy the first condition, Aquinas says, something must be a being in actuality in a certain way—"either *in itself* or *in another*". Strictly speaking, however, only compounds are beings in actuality *in themselves*. For only they have forms (or actualities) as proper parts or constituents. The fact that something can satisfy the first condition by being either a being in actuality in itself or in another, therefore, shows that his use of 'being in actuality' here is distinct from his strict or narrow sense. Indeed, by adding the qualification 'or *in another*', Aquinas appears to be extending the narrow sense of 'a being in actuality' to include forms (or actualities), as well as compounds. For only forms can be said to be *in another* (*in alio*). But the fact that Aquinas also restricts his use of the term here to just these two types of being shows that it is distinct from the broad sense of 'being in actuality' as well.

<sup>29</sup> Indeed, we have seen that Aquinas himself is happy to speak of the "nature" or "essence" of prime matter. See again *In Meta.* 7.2.1285 (cited in §4.2). See also *DEE* 2 and *QDP* 9.1 ad 6, and the texts cited in Wippel 2000, §9.2 ("The Nature of Prime Matter").

In short, what all of this appears to show is that when Aquinas introduces his first condition on individuality, he is using ‘a being in actuality’ in a sense that is midway between what I have called the narrow and broad senses of the term. For the sake of clarity, we can set out these three different senses here as follows:

### Three Senses of ‘A Being in Actuality’

- *Narrow sense*: A being that possesses actuality as a proper part or constituent (= compounds).
- *Middle sense*: A being that possesses actuality in itself or in another (= forms and compounds).
- *Broad sense*: A being that possesses actuality in some way or other (= anything that exists).

As should be clear, the sense of ‘a being in actuality’ that is relevant for satisfying the first condition on individuality is the middle sense. But in this sense, prime matter is clearly not a being in actuality. For only a form or compound can qualify as *a being in actuality* in this sense.<sup>30</sup> For the same reason, prime matter fails to be an individual, despite the fact that it exists and hence qualifies as *a being in actuality* in the broad sense.

So much for the first condition on individuality. If we turn now to Aquinas’s second condition, I think we can see that prime matter fails it as well. For strictly speaking, Aquinas thinks, only certain beings—namely, those that exist in actuality in the sense required to satisfy the first condition—can be said to belong to a species.<sup>31</sup> For the same reason, only they can be said to possess a nature (or quiddity) in the strict and proper sense. Insofar as distinct portions of prime matter all belong to a distinctive type of being, and hence exactly resemble one another in a certain respect, there is of course a sense in which they can be said to belong to the same “natural kind” and hence possess a “nature”. But insofar as they also serve as the principle of individuation, or account for the distinctness of distinct substances belonging to the same species, such portions must be intrinsically distinct, and hence cannot be strictly said to share anything in common.<sup>32</sup>

<sup>30</sup> In other places Aquinas is happy to allow that even simple substances have actuality in themselves. Strictly speaking, therefore, we should say that only a form, compound, or substance can qualify as *a being in actuality* in the middle sense. Compare senses (1)–(3) of ‘being in actuality’ in the Appendix.

<sup>31</sup> Once again, such beings should be understood to include substances as well as forms and compounds. Although beings of all three types can be said to possess a nature or essence, and hence belong to a species or natural kind, Aquinas thinks that only substances (whether compound or simple) have natures or essences without qualification. See, e.g., *DEE* 4 and 6. See also the discussion in §1.5.

<sup>32</sup> Aquinas’s views about common natures are complicated, and I cannot discuss them here. But see my 2012a for discussion of why beings that are intrinsically distinct cannot have a common nature. See also *QDV* 3.5 ad 3, where Aquinas makes explicit that prime matter does not, strictly speaking, have a nature or essence but is part of the nature or essence of material substances.

In the end, therefore, I think it is clear that prime matter fails both of Aquinas's conditions on individuality, and hence counts as a type of non-individual being for him. Indeed, I think that this helps to explain why he insists that prime matter possesses a type of unity or numerical oneness distinct from that of other types of being. Like individuals, prime matter exists. But the radical difference between these two types of being requires us to distinguish the types of unity associated with each.

If my interpretation of Aquinas is correct, the standard objection to his conception of prime matter is misguided. When Aquinas says that prime matter must be conceived of as "pure potentiality", he is not saying anything against its reality or existence.<sup>33</sup> Nor does Aquinas mean to be denying that prime matter has a distinctive character or nature.<sup>34</sup> On the contrary, he means to be adding a further qualification on the standard medieval conception, insisting that prime matter is not merely atomless gunk, but *non-individual* gunk. Obviously, the description of prime matter as non-individual here should not be taken to imply that prime matter is a universal.<sup>35</sup> For, as we have seen, the non-individuality of prime matter has solely to do with its lack of being or actuality through itself, and hence its inability, even in principle, to exist apart from forms or compounds. Insofar as prime matter is non-individual in this sense, I think it is best understood in terms of what contemporary philosophers sometimes refer to as *stuff* rather than *things* (in a technical sense of both terms). Thus, when Aquinas adds non-individuality to the standard medieval conception of prime matter, I suggest that we interpret him to mean that such matter is not merely atomless gunk, but *gunky stuff*—that is, a type of stuff whose parts are all such as to have proper parts.

The contemporary notion of *stuff* ultimately provides us with what I have claimed to be missing from the secondary literature—namely, a precise ontological category in terms of which Thomistic prime matter can be understood. Even so, we must be careful how we understand this notion. For in addition to introducing a type of being whose members are, in some sense, non-individual, this notion is often filled out in ways that are incompatible with Aquinas's understanding of prime matter. For

<sup>33</sup> In this connection, it is interesting to note how Godfrey of Fontaines, a secular master influenced by Aquinas, struggled to articulate a similar conception of prime matter by saying that although it is not a type of actual being (in virtue of being pure potentiality), it is not nothing either. For references and discussion, see Wippel 1987, 261–7.

<sup>34</sup> This point is often missed by commentators, who habitually suppose that for something to have a distinctive character or nature, it must possess some distinct forms or properties. To take just one example, consider the following remarks by Richard Cross:

Aquinas argues that, although it is true that matter exists, matter is merely pure potentiality: the thinnest possible existent, in itself lacking any genuine attribute whatsoever. (Cross 1998, 17)

See §§6.4–5 for an account of the precise sense in which prime matter, as well as other sorts of being, can be said to have a distinctive character or nature even in the absence of forms or properties.

<sup>35</sup> This interpretation has already been excluded (§5.4); and in any case, Aquinas is explicit in his denial that universals of any sort exist outside the mind (see again *In Sent.* 2.17.1.1, quoted in §1.4).



example, stuff is often said to possess the following three characteristics: (1) it comes in fundamentally different kinds, (2) it can't be counted but only measured, and (3) it lacks any identity or principle of unity of its own. Thus, standard contemporary examples of stuff often include *water*, *gold*, and *wood*, the names of which (like mass terms generally) don't admit of pluralization but require the addition of terms of measurement (we don't count *waters* but *cups* or *liters* of water). And, given the connection between number and identity, it is natural to think that if something can't be counted, it must lack a principle of unity or identity of its own.<sup>36</sup>

As we have seen, however, Aquinas denies all three characteristics of prime matter. For him, there is just one fundamental type of prime matter (or stuff) for all material things; what is more, it can be counted and hence must have an identity or principle of unity of its own (otherwise it couldn't play all the various theoretical roles that he assigns to it). Admittedly, 'prime matter' is a term that resists pluralization and is most naturally used together with some term of measurement (hence my talk of *portions* of prime matter rather than *prime matters*). But presumably this linguistic fact is to be explained, on Aquinas's view, by the fact that prime matter itself lacks individuality, and hence possesses a very distinctive type of unity.

Not all contemporary philosophers insist that stuff must possess the characteristics just mentioned. Ned Markosian, for example, who is one of the most prominent contemporary stuff theorists, thinks of stuff much more along the lines of Aquinas's prime matter.<sup>37</sup> Indeed, like Aquinas, he thinks of matter or stuff as not only lacking the characteristics mentioned at (1)–(3), but also possessing each of the following further characteristics: (4) it can't exist apart from any things (in particular, properties and objects), (5) it comes in distinct portions, (6) distinct portions of stuff can enter into various part-whole relations, and (7) there are arbitrary sums of matter.

Despite these similarities, Markosian stuff is still different from Thomistic prime matter in some important respects. Markosian denies, for example, that matter or stuff can enter into any sort of part-whole relation with things. Thus, for him, matter does not partially compose (or even serve as a constituent for) material objects, but rather *constitutes* them, where constitution is to be understood in terms of a *sui generis* non-compositional relation. Again, unlike Aquinas, Markosian denies that matter or stuff is gunky, insisting instead that it is ultimately composed of point-sized portions—that is, simple, indivisible, but also non-individual “atoms” of stuff.

<sup>36</sup> The assumption that stuff possesses the characteristics mentioned at (1)–(3) is, I think, behind the following characterization of the difference between stuff and things, which is not uncommon in the literature:

Some philosophers have thought that the most fundamental ontological difference is the difference between *things* and *stuff*. On their view, reality divides into entities and non-individuated matter or stuff. *Things* can be counted: whenever there are some things, it always makes sense to ask how *many* of them there are. *Stuff* cannot be counted, but it can be measured: whenever there is some stuff, it always makes sense to ask how *much* of it there is. (McDaniel 2010b, 25)

<sup>37</sup> What follows is based on Markosian 2004 and 2005.

As all of this helps bring out, there are a number of different ways of thinking about stuff, some of which are compatible with Aquinas's own ways of thinking and some of which aren't. Provided we are careful to think of stuff in its most general terms—that is, as a special type of non-individual being—these differences will not detract from the usefulness of characterizing Thomistic prime matter in terms of stuff rather than things.

Before concluding, I want to mention two further aspects of Aquinas's views that are illuminated by my “stuff” interpretation of his metaphysics of prime matter. The first has to do with his views about substantial change. As we have seen (§4.1), part of what makes substantial change distinctive, for Aquinas, is that its substratum—prime matter—cannot be characterized by the forms or properties it successively takes on—substantial forms. Previously, I appealed to the nature of substantial forms themselves to explain prime matter's failure to be characterized by such forms. Thus, I suggested that Socrates's prime matter fails to be characterized by his humanity because, like other substantial forms, humanity is not the type of form or property that can characterize a subject contingently or accidentally. Still, it might be wondered whether there is anything on the side of the prime matter itself to explain this failure. As in the case of its forms, one could just assert that it is part of the nature of prime matter not to be characterized by its substantial forms. But that's hardly illuminating. In fact, as we can now see, even the appeal to the nature of substantial forms to explain this failure doesn't really provide much illumination either.<sup>38</sup>

Note, however, that if we conceive of prime matter as a type of non-individual stuff, as I have been arguing that we should, we get a much more illuminating account of why prime matter fails to be characterized, even in a derivative or secondary way, by the substantial forms that inhere in it. For, insofar as prime matter is non-individual, it is not of the right ontological type or category to be so characterized. Only *individuals* can be human, and hence only *they* can be characterized by the form of humanity. And the same would appear to be true for the subjects of other substantial forms.<sup>39</sup> This line of reasoning is, I think, what ultimately underlies Aquinas's approval of Aristotle's famous description of prime matter as “neither a what, nor a quality, nor any of the other categories by which being is divided or determined” (*In Meta.* 7.2.1285). Indeed, it also seems to me to explain why Aquinas asserts, in this same context, that prime matter cannot be characterized by the forms it possesses:

<sup>38</sup> This is especially true if we take into account a complication alluded to earlier (§4.1, n. 7 and n. 13, this chapter)—namely, that Aquinas is prepared to grant, in certain circumstances, that even a substantial form or property can characterize its possessor contingently, even if not accidentally. See §§13.4–5 for further discussion.

<sup>39</sup> As it turns out, however, there is nothing to prevent the possibility of prime matter's being indirectly or derivatively characterized by certain accidental forms (namely, those belonging to the substance of which it is a part). See §§6.3–5 for more on the relation between characterization and property possession, both in general and in the specific case of prime matter.

For just as it is true that ‘a human is white’ but not true that ‘a human is whiteness’ or ‘humanity is whiteness’, so too, it is true that ‘this enmattered thing (*materiatum*) is human’ but not true that ‘matter is human’ or ‘matter is humanity’. (*In Meta.* 7.2.1289)

The other aspect of Aquinas’s views that is illuminated by my interpretation of prime matter as non-individual stuff has to do with the strong reaction that his views provoked throughout the Middle Ages. Indeed, if we cast the dispute about prime matter between Aquinas and his opponents as one that concerns its individuality (rather than its existence), it is easy to see why his views are so often misunderstood or rejected as incoherent. Like other medievals, Aquinas must allow that we can make true claims of the form ‘*a*’s prime matter at  $t_1$  is identical to *b*’s prime matter at  $t_2$ ’. But whereas such claims make perfect sense on the assumption that prime matter is individual, they seem problematic on the assumption that prime matter is non-individual. For in the former case, expressions such as ‘*a*’s prime matter’ and ‘*b*’s prime matter’ can be understood straightforwardly as singular terms. In the latter case, by contrast, it is hard to know what to make of such expressions. Aquinas can, of course, insist that such expressions are a distinctive type of singular term, one involving a primitive sort of reference to non-individual stuff. This, I think, is precisely what he should say (and, in effect, does say). Even so, it is easy to overlook

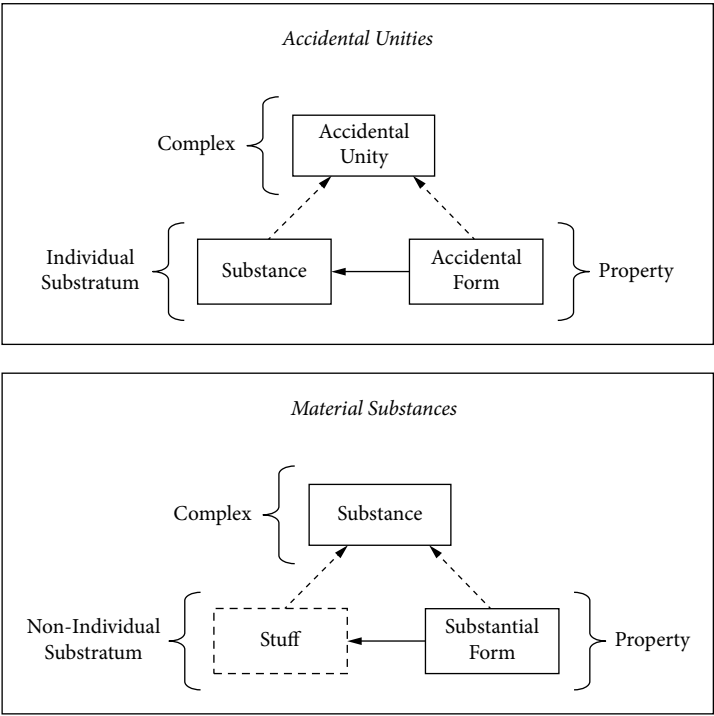


Figure 5.4 Complete Hylomorphism

this possibility, as well as to challenge its coherence. In fact, the need to invoke such a primitive sort of reference merely highlights what is, perhaps, the central worry raised by any type of stuff ontology, and explains why the existence of stuff remains controversial today and why many of its opponents continue to reject it as incoherent.<sup>40</sup>

With this understanding of prime matter, we can at last attempt to provide a representation of Aquinas's complete hylomorphism. Indeed, if we return to our previous diagram (Fig. 5.3) with the foregoing clarifications in mind, we can represent this hylomorphism more accurately in terms of the diagram at Fig. 5.4.

Eventually, we shall see that even this representation of Aquinas's views will require some refinement, in light of his specific conception of the human soul (§11.4, §12.5). For the time being, however, we can think of it as providing us with his complete or full-blown hylomorphism.

<sup>40</sup> See, e.g., McDaniel 2003 and Zimmerman 1997; for a response along the lines suggested in the text, see McKay 2009.

## 6

# Hylomorphism as a Type of Substratum Theory

We now have before us the main elements of Aquinas's hylomorphism. For reasons that are, perhaps, obvious—including, most notably, that Aquinas conceives of hylomorphic compounds as complexes of substrata and properties—I think his hylomorphism can be usefully classified as a type of substratum theory. In this and the next chapter (Chs 6–7), I clarify and defend the specific type of substratum theory to which his hylomorphism commits him. In this chapter, I provide a framework and terminology designed to highlight the distinctiveness of Aquinas's views, as well as to facilitate their comparison with some more familiar forms of substratum theory. In Chapter 7, I draw on this same framework and terminology to mount a defense of Thomistic substratum theory against its chief contemporary rivals, especially when it comes to the proper understanding of ordinary objects.

My discussion here is divided into three parts. I begin with some remarks about substratum theory in general and the place of Aquinas's hylomorphism within it. Next I turn, in some detail, to Aquinas's views about an issue that has been of special concern to substratum theorists historically—namely, the relationship between predication and property possession. Finally, I clarify the implications of Aquinas's views for his understanding of ordinary objects.

## 6.1 Substratum Theory and the Nature of Substrata

In contemporary metaphysics, it is standard to contrast substratum theory with bundle theory. Both theories typically take for granted that substances are associated with complex objects possessing distinct metaphysical parts or constituents, which at the very least include properties.<sup>1</sup> In this respect, both qualify as *constituent ontologies*, and hence are to be contrasted with *non-constituent ontologies*.<sup>2</sup> But whereas bundle

<sup>1</sup> I speak of “metaphysical” parts here to emphasize that the complexity being invoked need not be material or physical. Thus, both substratum and bundle theorists can allow that material objects are metaphysically complex (say, because they have distinct properties as parts or constituents) while at the same time denying that they are physically complex (say, because they have only a single physical part).

<sup>2</sup> For the distinction between these two types of ontology, see Armstrong 1989, Loux 2005, and Wolterstorff 1991. Armstrong sometimes refers to these two types of ontology as *layer-cake* and *blob*

theorists take the relevant metaphysical parts or constituents to include properties alone, substratum theorists insist that they also include a further type of entity—namely, a *sui generis* type of particular that serves as their substratum. Such particulars are usually called ‘bare particulars’ to emphasize that their identity (even if not their existence) is independent of the properties that they possess.<sup>3</sup>

Hereafter I shall use the term ‘bare particularism’ in a broad sense to refer to any form of substratum theory that includes a commitment to bare particulars.<sup>4</sup> Aquinas’s hylomorphism bears some obvious similarities to substratum theory so understood. To illustrate, consider how both theories account for the existence of a material object such as Socrates. (Here it might be useful to refer back to Figure 5.2 in §5.3.) At a minimum, both theories appeal to three distinct types of being: (a) an immanent (and possibly also complex) property, in this case ‘humanity’;<sup>5</sup> (b) a *sui generis* type of being that serves as the substratum for this property; and (c) a complex (or concrete state of affairs) that exists in virtue of (and just so long as) such a substratum possesses such a property. As noted previously (§4.3), contemporary substratum theorists often refer to the relation that properties bear to substrata as *predication* or *instantiation* rather than *inherence*;<sup>6</sup> and they sometimes refer to the relation that substrata and properties bear to the complexes of which they are the constituents as something other than *composition* (such as *constituency* or *structure-making*).<sup>7</sup> But these appear to be mainly verbal differences, and in any case do not affect the structural similarities between the two views.

Such similarities are, I think, sufficient to qualify Aquinas’s views as a form of substratum theory. There remain, of course, substantive differences over the nature of substrata. Contemporary substratum theorists typically conceive of the being underlying Socrates’s humanity not only as particular, but also as metaphysically simple, whereas Aquinas denies both of these things (§§5.4–5). Thus, insofar as Aquinas conceives of such a being as prime matter, it is not simple but complex (indeed, it is gunky); and insofar as Aquinas conceives of this same being as stuff, it is not particular, but non-individual. As I see it, however, such substantive differences merely highlight the distinctive nature of Thomistic substratum theory rather than call into question its classification as such.

*ontology*, respectively. As he points out, moreover, anyone who denies either the existence of properties or their immanence will qualify as a non-constituent or blob ontologist. See in particular Armstrong 1989, 76–7.

<sup>3</sup> Bare particulars are also sometimes referred to as *thin particulars*. See again §1.1, n. 12.

<sup>4</sup> As we shall see in §6.2, bare particularists disagree among themselves about the precise relationship between bare particulars and ordinary substances such as Socrates. Thus, some take Socrates to be identical to a bare particular, whereas others take him to have such a particular as a constituent part.

<sup>5</sup> I add the qualification ‘possibly also complex’ not because Aquinas thinks of forms or properties as complex—on the contrary, he thinks of them as simple—but rather because contemporary substratum theorists often take natural kinds to be explicable in terms of conjunctions of properties. See, e.g., Armstrong 1997, §4.3.

<sup>6</sup> Thus, Loux 2005 speaks of *predication*, whereas Armstrong 1997 and 1989 speak of *instantiation*.

<sup>7</sup> McDaniel 2009b speaks of *structure-making*.

Perhaps it will be objected, however, that central to any form of genuine substratum theory is the claim that what underlies the properties of a thing must be individual, if not a bare particular. For one of the standard motivations for substratum theory is that it can provide us with a way of explaining individuality. In principle, it seems possible for distinct objects to share all the same properties. But it is hard to see how this could be possible unless the ultimate bearer of properties is conceived of along the lines of a bare particular—that is to say, as something which is itself a primitive individual. On Aquinas's view, by contrast, it is a mystery where individuality comes from. Indeed, since he takes matter to be non-individual stuff, it would appear that (contrary to his own insistence) matter cannot *individuate*.

The problem with this objection is that it runs together two things that must be kept separate for Aquinas—namely, that which accounts for the *distinction* between two (or more) objects and that which accounts for their *individuality*. As we have seen (§5.4), Aquinas thinks of matter (or non-individual stuff) as coming in portions that are themselves intrinsically distinct. Insofar as such portions are intrinsically distinct, they can themselves account for the distinction between distinct objects sharing all the same properties. In this sense, therefore, matter clearly can individuate for Aquinas. That said, insofar as matter is non-individual, it obviously cannot account for the individuality of such objects. But Aquinas never suggests that matter can individuate in this sense, nor is there any mystery about where he thinks such individuality comes from. For, as we have also seen (§5.5), Aquinas takes ordinary objects to be things that have being or actuality through themselves (*per se*)—where such actuality can be traced directly to their constituent forms or properties. When it comes to the individuation of ordinary objects, therefore, Aquinas thinks that it is matter that accounts for their *distinction*, and forms or properties that account for their *individuality*.<sup>8</sup>

So far so good. But there is a further objection that can be raised for my classification of Aquinas's hylomorphism as a type of substratum theory. For insofar as his hylomorphism requires us to conceive of substrata in terms of non-individual stuff, it would appear to be inconsistent with another standard motivation for substratum theory—namely, the desire to account for the metaphysics of ordinary subject–predicate discourse. Predications of the form '*a* is *F*' certainly *appear* to assert that a property (namely, that associated with the predicate term) belongs to a particular (namely, that associated with the subject term). And according to many substratum theorists, the only (or at least the best) way to make sense of such appearances is to take them at face value—in which case it will follow that, whatever else a substratum is, it must be a particular.<sup>9</sup>

<sup>8</sup> Strictly speaking, this claim requires a bit of qualification. Since Aquinas takes the notion of individuality to include distinctness (see again the discussion of his second condition on individuality in §5.5), it would be more accurate to say that, for him, matter accounts for the distinction of ordinary objects, whereas forms or properties *together with matter* account for their individuality.

<sup>9</sup> See Bailey 2012 and the references cited therein.

There are at least two things to be said in response to this objection. First, the desire to provide a metaphysics of subject–predicate discourse is not the only possible motivation for introducing substrata. On the contrary, we have seen that Aquinas himself is motivated to introduce them on the basis of his account of change. And this further motivation is perfectly consistent with the view that substrata are non-individual.

Second, the distinction between substratum and bundle theories, at least as I understand it, provides an exclusive and exhaustive division of types of constituent ontology. On this understanding, it makes perfect sense to use ‘substratum theory’ as a general term to cover all forms of constituent ontology that take the metaphysical parts or constituents of objects to include not only properties but also entities of some further *sui generis* type bearing a distinctive relation to these properties. What is more, this understanding of the distinction highlights one of the important contributions that medieval discussions have to make to contemporary debates on this score—namely, the identification of certain dialectical possibilities that are often overlooked in these same debates. Indeed, attention to this distinction helps us to appreciate that substratum theory, far from being a monolithic view, is more like a genus with multiple species, depending on whether substrata themselves are conceived of as individual or non-individual, simple or complex, atomistic or gunky. In fact, based on the foregoing, I think we can usefully divide substratum theories into six main types:

#### A Sixfold Division of Substratum Theories

- (1) Three types of individualism (i.e., theories that conceive of substrata in terms of individuals):
  - (a) *Simple individualism*: substrata are simple individuals;
  - (b) *Atomistic individualism*: substrata are complex individuals ultimately composed of simple individuals;
  - (c) *Gunky individualism*: substrata are gunky individuals—that is, individuals each of whose parts have proper parts.
- (2) Three types of non-individualism (i.e., theories that conceive of substrata in terms of non-individual stuff):
  - (a) *Simple non-individualism*: substrata are to be understood in terms of simple stuff;
  - (b) *Atomistic non-individualism*: substrata are to be understood in terms of complex stuff ultimately composed of “atoms” of stuff;
  - (c) *Gunky non-individualism*: substrata are to be understood in terms of gunky stuff—that is, non-individuals each of whose parts have proper parts.



As this taxonomy helps to emphasize, contemporary discussions of bare particularism merely scratch the surface in terms of the dialectical possibilities for developing a form of substratum theory. Indeed, even this taxonomy ignores the possibility of mixed views—that is, types of substratum theory that combine elements of more than one of the six “pure” types (say, by conceiving of substrata as including both individuals and non-individual stuff, or both atoms and gunk, among their proper parts). As all of this helps to make clear, bare particularism represents only a single variation on one of a number of different possible types of substratum theory—namely, (1a). And even here it can hardly be thought of as exhausting the possibilities. For, presumably, bare particulars are not the only type of simple individual in terms of which substrata could be conceived.<sup>10</sup>

Although these responses seem to me sufficient to resolve the main worries one might have about non-individual substrata, I don’t think much hangs on the responses themselves. Indeed, I suspect that both the objections and my responses reflect terminological preferences more than anything else. For reasons already given, I prefer to use ‘substratum theory’ in a very broad sense (and will continue to do so in what follows). But if someone else prefers to speak of Aquinas’s views, or the views of medievals more generally, as marking out a new type of constituent ontology distinct from both bundle theory and substratum theory, I have no real objection. On the contrary, I think such an approach could serve equally well to bring out what is of most interest to me—namely, the distinctiveness of the medieval views themselves.

## 6.2 Metaphysical Structure

In defending my classification of Aquinas’s hylomorphism as a type of substratum theory, I have been focusing on its structural similarities to the standard

<sup>10</sup> Although bare particularism, understood as a version of (1a), is the only type of substratum theory to receive any explicit attention in the contemporary literature, it may be that the other two types of individualism—(1b) and (1c)—are also a going concern, at least implicitly. For among substantialists about spacetime—that is, those who think spacetime is a genuine thing (as opposed to a system of relations parasitic on other things)—some want to identify material objects with subregions of spacetime and hence to conceive of the location relation in terms of identity. Whether such substantialist monists (or super-substantialists, as they are sometimes called) go on to endorse an atomistic or a gunky (also known as ‘Whiteheadian’) structure for spacetime, they may well think of the regions themselves as the substrata for the properties of everyday material objects.

As for medieval philosophers, if what I’ve said in §5.4 is correct, the two main options for them are gunky forms of individualism and non-individualism—that is, (1c), which represents the standard medieval view, and (2c), which represents Aquinas’s view. I say these are the ‘two main’ options because, insofar as the medievals take prime matter to be divisible, they would seem to be committed to rejecting both (1a) and (2a)—that is, the simple types of both individualism and non-individualism. And insofar as they follow Aristotle in rejecting any form of atomism, they would also seem to be committed to rejecting (1b) and (2b)—that is, the atomistic types of both individualism and non-individualism. It may be, however, that some medievals are best understood in terms of some type of mixed view. On a natural interpretation of Scotus, for example, a given portion of prime matter must be understood in terms of an individual that includes an haecceity—that is, a type of atomic or simple individual—as well as atomless gunk, in which case his views would seem to combine elements of (1a) and (1c). See Zimmerman 1996a for discussion of some medieval mixed theories. See also Pasnau 2011, chs 3–4.

contemporary form of substratum theory—bare particularism—and have thus been emphasizing its differences from the latter only at the level of substrata. It must be noted, however, that there are also some important differences at the level of structure itself.

So far we have noted certain similarities between what Aquinas and bare particularists have to say about Socrates's possession of a single property—namely, his humanity. But, of course, Socrates has a number of other properties as well—including his color, shape, and size. What do Aquinas and bare particularists have to say about Socrates's possession of these further properties?

As a rule, bare particularists treat all properties of ordinary objects in the same way—at least when it comes to their monadic or non-relational properties, which are the only ones with which I shall be concerned here. More precisely, bare particularists assume that the possession of such properties can be explained by appealing to complexes of a single type—namely, complexes in which the properties are all instantiated (or co-instantiated) by the same bare particular. This account of property possession goes hand in hand with one of the chief motivations for bare particularism historically—the desire for an elegant treatment of the relationship between ordinary subject–predicate discourse and property possession.<sup>11</sup> To see why, consider the following three examples of ordinary predication, the first two of which we have already discussed in connection with Aquinas's views about change (in §4.4):

#### Examples of Ordinary Predication

- (1) Socrates is human.
- (2) Socrates is white.
- (3) Socrates is musical.

Intuitively, each of the predications listed here asserts of a certain property (namely, that associated with the predicate term) that it belongs to a certain particular (namely, that referred to by the subject term).<sup>12</sup> But how are we to make sense of our intuitions in this regard?

Bare particularists typically respond by offering one of two accounts, which we can call *thin particularism* and *thick particularism*.<sup>13</sup> According to thin particularism,

<sup>11</sup> See Bailey 2012 and Loux 2006 for further discussion and references.

<sup>12</sup> For the sake of simplicity, I assume in what follows that *humanity*, *whiteness*, and *musicality* are all genuine monadic (or non-relational) properties.

<sup>13</sup> Here I am co-opting some terminology introduced by Armstrong (1997, 124), who introduces the term 'thin particular' to refer to bare particulars and the term 'thick particular' to refer to complexes possessing thin particulars as constituents. See also Pasnau (2011, 102–8 and *passim*), who speaks of *thin* vs. *thick substances* to distinguish substances considered with or without their properties. It is not clear to me whether Pasnau takes thick substances to be distinct from thin substances, and hence what their relationship is to what I call *accidental unities*.

what is referred to by the subject terms of predications (1)–(3) is a bare particular. Hence, the predications themselves are to be understood as ascribing a property to a bare particular that instantiates it. On this account, we can describe the copula involved in these predications—as well as in ordinary subject–predicate discourse more generally—as the ‘is’ of instantiation.

According to thick particularism, by contrast, what is referred to by the subject terms of predications (1)–(3) is not a bare particular, but a complex (or concrete state of affairs) that exists in virtue of a bare particular’s instantiating the relevant properties. For the same reason, predications (1)–(3) are to be understood, on this account, as ascribing a property not to a bare particular, but to a complex of which it is a constituent. On this account, we can describe the copula involved in these three predications—as well as in ordinary subject–predicate discourse more generally—as the ‘is’ of constituency.

Thin and thick particularism both have some very counterintuitive consequences. Consider first thin particularism. Insofar as it identifies the subjects of ordinary predication with bare particulars, it is committed to saying that Socrates himself is a bare particular. But insofar as thin particularism identifies Socrates with a bare particular, it also appears to be committed to saying that Socrates possesses all of his properties contingently. For this is the way in which bare particulars are typically said to possess their properties. But both of these consequences seem highly counterintuitive. Socrates is among the most familiar objects of experience. But bare particulars appear to be purely theoretical entities, and hence not the right type of being to be directly experienced.<sup>14</sup> Again, it seems obvious that Socrates possesses at least some of his properties essentially, including his *humanity*. To deny this would appear to be tantamount to denying that he has a nature at all. But, of course, if Socrates possesses his *humanity* essentially, then *pace* thin particularism, at least one of our three predications, (1), is essential rather than contingent.

Thick particularism is often thought to have an advantage over thin particularism precisely because it can avoid these untoward consequences. Thus, insofar as thick particularism identifies Socrates with a complex that includes properties among its constituents, it would seem to allow for Socrates himself to be experienced.<sup>15</sup> What is more, complexes (or concrete states of affairs) are generally said to possess their constituent properties essentially.<sup>16</sup> But, of course, if that is right, then thick particularism can uphold the intuition that Socrates possesses his *humanity* essentially. Note, however, that insofar as thick particularism treats all of Socrates’s properties in the same way, it appears to go to the other extreme, requiring that Socrates possesses

<sup>14</sup> But see §7.1 for discussion of how this appearance might be challenged.

<sup>15</sup> See, e.g., Armstrong 1997, §7.11 for a defense of thick particularism along these lines.

<sup>16</sup> It is sometimes said that complexes (or concrete states of affairs) possess all of their constituents essentially, whether properties or not. See, e.g., Loux 2010, 8, who describes this as “something like a framework principle for constituent ontologists”.

all his properties essentially, including not only his *humanity* but also his *whiteness* and *musicality*.<sup>17</sup> Some thick particularists, such as David Armstrong, are happy to embrace this consequence and simply define the “nature” of Socrates in terms of the conjunction of all his non-relational properties:

Suppose *a* instantiates *F*, *G*, *H* . . . They comprise the totality of *a*'s (non-relational) properties. Now form the conjunctive property, *F*&*G*&*H* . . . Call this property *N*, where *N* is meant to be short for *a*'s nature. *a* is *N* is true, and *a*'s being *N* is a (rather complex) state of affairs. (Armstrong 1989, 95)

Again, as Armstrong says in a related context:

[W]e might note that the thick particular seems quite close to Leibniz's notion of a particular. For if a particular is taken along with all its non-relational properties, then it will have all these properties 'in every possible world'. So, in a sense, it has every such property necessarily. (Armstrong 1997, 125)

But, of course, this, too, is highly counterintuitive. For just as it seems obvious that Socrates possesses *humanity* essentially, so it seems equally obvious that he possesses *whiteness* and *musicality* contingently. For the same reason, it would seem that, *pace* thick particularism, only the first of our three predications, (1), can be described as essential.

In spite of these counterintuitive consequences, it cannot be denied that thin and thick particularism have at least one major theoretical advantage. The account of property possession provided by each supports an elegant analysis of ordinary (intrinsic) predication. On the surface, predications of this sort all appear to be of a single form—namely, '*a* is *F*'. Thin and thick particularism both preserve this appearance, differing only in their understanding of the type of copula involved in the deep, logical structure of such predications—the 'is' of instantiation vs. the 'is' of constituency. For the sake of future reference, we can state their respective analyses of ordinary predication explicitly as follows:

#### Ordinary Predication—Bare-Particularist Analyses

- *Thin particularist analysis*: Ordinary (intrinsic) predications of the form '*a* is *F*' are most perspicuously represented as of the form '*a* instantiates the property *F*-ness'.
- *Thick particularist analysis*: Ordinary (intrinsic) predications of the form '*a* is *F*' are most perspicuously represented as of the form '*a* has the property *F*-ness as a constituent'.

<sup>17</sup> But again, see §7.1 for some discussion of how this appearance might be challenged.

If we return now to Aquinas's hylomorphism, and in particular the understanding of property possession it requires, we can see that it differs from both types of bare particularism just considered. Like the proponents of thick particularism (including Armstrong himself), Aquinas identifies Socrates with a substratum-property complex, and thus denies that all of his properties are contingent. But unlike thick particularists, who regard all of Socrates's properties as constituents of him, Aquinas thinks this is true of only some of them. Thus, whereas *humanity* is a constituent of Socrates, and hence essentially possessed by him, the same cannot be said of *whiteness* or *musicality*. On the contrary, the latter two properties are constituents of larger wholes (or accidental unities) of which both Socrates and these properties are proper parts or constituents. And, of course, this is because, unlike *humanity*, Aquinas takes the further properties of *whiteness* and *musicality* to inhere not in Socrates's substratum (or better, his prime matter), but rather in Socrates himself.

As this description of Aquinas's account of property possession makes clear, his substratum theory has a distinctive two-tier structure. As in the case of bare particularists of both the thin and thick variety, his account of property possession appeals to complexes of substrata and properties. But unlike theirs, his account appeals to complexes of two different types, where the difference is to be explained in terms of their differing metaphysical structure or constituents. Thus, to explain Socrates's possession of *humanity*, Aquinas thinks that we must appeal to material substances—that is, to complexes in which portions of prime matter or stuff serve as the substrata, and the properties possessed by them determine the specific natural kind to which their host complex (or substance) belongs. By contrast, to explain Socrates's possession of *whiteness* or *musicality*, or indeed any other accidental forms or properties, Aquinas thinks that we must appeal to accidental unities—that is, to complexes in which substances themselves serve as the substrata, and the properties possessed by them determine further aspects of their character. Thus, as Aquinas says in a passage quoted previously (§4.4):

When I say 'Socrates is human', the truth of this statement is explained by the composition of the form of humanity with the individual matter by which Socrates is *this* human. Likewise, when I say 'Socrates is white', the explanation of its truth is the composition of whiteness with a subject. And similarly in other such cases. (*In Meta.* 9.11.1898)

As the foregoing helps to make clear, Aquinas's two types of complex—material substances and accidental unities—are intimately related. Indeed, they form a kind of nested hierarchy in which material substances comprise the most basic type of complex (what we might call *first-order complexes*), and the accidental unities of which they are a part comprise a further type of complex that includes such material substances (what we might call *second-order complexes*). To illustrate this pictorially, consider the diagram at Fig. 6.1, which is a slight modification of a diagram first introduced in §1.2.

It is precisely because Aquinas appeals to different types (or orders) of complex that he can preserve the intuitive distinction between a substance's essential and

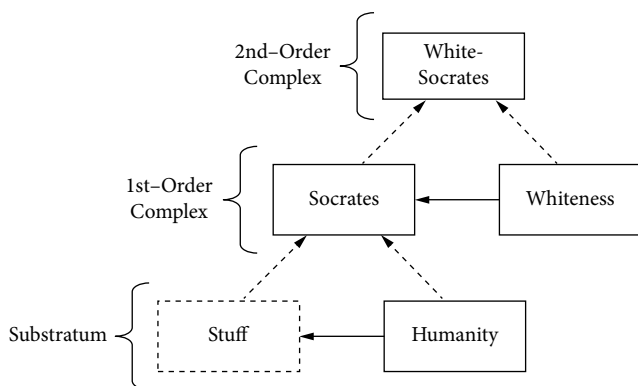


Figure 6.1 Hierarchy of Complexes involving Socrates

accidental properties. Unlike Armstrong, therefore, Aquinas can insist that Socrates's nature both includes *humanity* and yet excludes *whiteness* and *musicality*.<sup>18</sup>

But what about the chief virtue of bare particularism—namely, its ability to preserve the intuition that ordinary subject–predicate discourse can be represented in terms of a single logical form? Doesn't Aquinas sacrifice this, just by virtue of appealing to complexes of different types to explain essential vs. accidental predications? Even if the correct answer to this question were 'yes', it's not clear how much of a cost this would be for Thomistic substratum theory (given how deeply entrenched the distinction between essential and accidental predication is in ordinary thought and language). As it turns out, however, the correct answer to the question is 'no'. To see why, however, we must take a closer look at Aquinas's views about predication and property possession—something that will enable us to further clarify Aquinas's hylomorphism, as well as the distinctive type of substratum theory to which it gives rise.

### 6.3 Predication and Property Possession

Recall our list of examples of ordinary predication:

#### Examples of Ordinary Predication

- (1) Socrates is human.
- (2) Socrates is white.
- (3) Socrates is musical.

<sup>18</sup> For Aquinas, it would perhaps be best to say that Socrates's nature includes *humanity* as a "formal" part, since Aquinas thinks of the nature of human beings as also including prime matter or stuff. See again §5.3, as well as §§9.1–2.

Given what we've just seen of Aquinas's account of property possession, it might seem that we have no choice but to analyze the logical form of (1) in terms of constituency, and that of (2)–(3) in terms of inherence. For the same reason, it might appear to follow that the logical forms of ordinary essential and accidental predications are of fundamentally different types for Aquinas, and hence that ordinary subject–predicate discourse as a whole does not admit of a uniform metaphysical treatment by him.

It is important to recall, however, what we have already seen of Aquinas's views about predication in the context of change (§4.4)—namely, that he takes ordinary (intrinsic) predications of the form '*a* is *F*' to assert the sameness of *a* with *an F*. Indeed, as Aquinas sees it, the main function of ordinary subject–predicate discourse is to enable us to assert the sameness of things that can be represented in different ways. To cite one further text in this connection:

In every true affirmative predication, the subject and predicate must signify something that is somehow the same in reality (*idem secundum rem*) but different in concept (*diversum secundum rationem*). This is clear both in predications having an accidental predicate and in predications having a substantial [or essential] predicate. (ST 1.13.12)

Initially, it might not be clear how all of this applies to predications such as our (1)–(3), which certainly don't seem to involve assertions of sameness. It is important to note, however, that in Latin, which contains no definite or indefinite articles, these predications are naturally represented as follows:

#### Examples of Ordinary Predication—Revisited

- (1\*) Socrates is (a) human.
- (2\*) Socrates is (a) white (thing).
- (3\*) Socrates is (a) musical (thing).

So represented, it should be clear that (1)–(3) do involve assertions of sameness—namely, that Socrates just *is*—or better, just *is numerically the same as*—a human being, a white thing, and a musician, respectively. Indeed, on Aquinas's account, we can describe the copula involved in these predications, as well as in ordinary subject–predicate discourse more generally, as the 'is' of numerical sameness. And if we recall that Aquinas distinguishes two forms of numerical sameness—identity and numerical sameness without identity—we can see that Aquinas's understanding of (1)–(3) is, in fact, part of a unified account of ordinary subject–predicate discourse—namely, one according to which each of the following is true: (i) ordinary (intrinsic) predications in general are to be understood in terms of numerical sameness, (ii) ordinary essential predications are to be understood in terms of identity, and (iii) ordinary

accidental predications are to be understood in terms of numerical sameness without identity.<sup>19</sup>

So far so good. But at this point it might be wondered how successful an analysis of ordinary predication in terms of numerical sameness is likely to be. For insofar as Aquinas takes ordinary predications of the form '*a* is *F*' to be more perspicuously represented as of the form '*a* is numerically the same as an *F*', it might appear that he has merely reintroduced the very phenomenon that he was attempting to analyze. For presumably '*an F*' in this context is shorthand for 'something that is *F*'. But what about the copula here? Evidently, it too must be analyzed in terms of numerical sameness with an *F*. But if that's right, we will not have made any progress in analyzing our initial predication. On the contrary, we'll be off and running on an infinite (and apparently vicious) regress.<sup>20</sup>

In response to this objection, it is important to emphasize that Aquinas is not attempting to analyze predication as such, but only the sorts of predication involved in *ordinary* subject–predicate discourse. In this respect, his analysis is just like that of the thin and thick particularists. Thus, when they analyze predications such as 'Socrates is human' or 'Socrates is white' in terms of instantiation or constituency, they don't mean to be eliminating subject–predicate discourse altogether. On the contrary, they mean to be suggesting that a certain class of predications—all and only those included in what we have been calling ordinary subject–predicate discourse—can be analyzed in terms of a primitive type of predication involving the 'is' of instantiation or constituency. Something similar is true in the case of Aquinas's analysis. When he analyzes ordinary predications in terms of numerical sameness with an *F*, the expression '*an F*' must itself be understood in terms of a primitive form of predication. Indeed, if we recall what Aquinas says about such expressions in the

<sup>19</sup> What I've just said about the role of numerical sameness in Aquinas's theory of predication might appear to be in conflict with a standard description of his views in the secondary literature. Historians of philosophy often divide medieval theories of predication into one of two types—inherence vs. identity theories. (For sources of the standard division, as well as some grounds for skepticism regarding its usefulness, see Malcolm 1979.) According to the inherence theory, an ordinary predication of the form '*a* is (an) *F*' is true just in case the form or property *F*-ness actually inheres in *a*. According to the identity theory, by contrast, such a predication is true just in case *a* is identical to an *F*. Aquinas is typically said to endorse a version of the inherence theory, and in this way to differ from philosophers such as Ockham, who endorse some version of the identity theory. (See, e.g., Klima 1996, and Geach 1969, esp. 43–4, and 1972, esp. 289–301.) But if my description of Aquinas's views is correct, it might appear that I am attributing to him an altogether different sort of theory—one that appeals to numerical sameness rather than inherence.

As I see it, however, there is no real conflict between the numerical sameness and inherence theories of predication. Indeed, given what we've seen of Aquinas's views about inherence, it should be clear that he thinks that a form or property *F*-ness actually inheres in a subject *a* when (and only when) *a* is numerically the same as an *F*. But if that is right, then the difference between the inherence and identity theories is not nearly as sharp as historians often suppose. On the contrary, we can think of both Aquinas and Ockham as holding a species of the same general analysis of ordinary predication, differing only as to whether the sort of numerical sameness involved in such predications must always be understood in terms of identity.

<sup>20</sup> Geach (1969, 43) raises a variation of this objection against the identity theory of predication, which he calls "the two-name theory of predication".



context of change, it should be clear that they must be understood in terms of the same sort of primitive predication that thick particularists appeal to in their analysis. For, as we have seen, to say that Socrates is human (or white), in the context of Aquinas's views about change, is just to say that Socrates is numerically the same as something possessing the property of humanity (or whiteness) as a proper part or constituent.<sup>21</sup>

Evidently, therefore, Aquinas thinks of ordinary (intrinsic) predications of the form '*a* is *F*' as involving two fundamentally different types of copula. That is to say, he thinks that such predications are more perspicuously represented as of the form '*a* is something that is *F*', where the first copula represents the 'is' of numerical sameness and the second represents the 'is' of constituency. If we keep in mind that Aquinas distinguishes essential vs. accidental predications in terms of the different types of numerical sameness they involve, we can state his analysis of ordinary predication, at least to a first approximation, as follows:

#### Ordinary Predication—Thomistic Analysis

- *Predication in general*: Ordinary (intrinsic) predications of the form '*a* is *F*' are more perspicuously represented as of the form '*a* is numerically the same as something, *b*, having the property *F*-ness as a constituent'.
- *Essential predication*: Ordinary essential predications of the form '*a* is *F*' are more perspicuously represented as of the form '*a* is identical to something, *b*, having the property *F*-ness as a constituent'.
- *Accidental predication*: Ordinary accidental predications of the form '*a* is *F*' are more perspicuously represented as of the form '*a* is numerically the same as (but not identical) to something, *b*, having the property *F*-ness as a constituent'.

In light of this statement of Aquinas's analysis, it should be clear that his understanding of predication preserves the chief virtue of bare particularism—namely, its ability to provide a uniform analysis of ordinary subject–predicate discourse. For although Aquinas's hylomorphism does lead him to distinguish two different types of property possession—constituency and inherence—he does not appeal to both in his analysis of ordinary predication. On the contrary, he analyzes all such predication in terms of numerical sameness and constituency, distinguishing essential vs. accidental predications only with respect to the specific type of numerical sameness they involve.

<sup>21</sup> More precisely, it is to say that Socrates is numerically the same as something possessing such a property as an *immediate* proper part or constituent—though we can ignore this complication here. See §4.4.

In addition to clarifying the uniformity of Aquinas's analysis of ordinary predication, the above statement also helps to make sense of something that might otherwise seem puzzling—namely, Aquinas's understanding of certain accidental predications, such as 'a musician is white' or 'a white man is musical'. As Aquinas recognizes, such predications are commonplace in ordinary language. And yet, if such predications had to be analyzed in terms of inherence, as it was initially tempting to think, then it would seem to follow that even accidental unities (such as musical-Socrates or white-Socrates) could have properties inhering in them. It is, I think, precisely because Aquinas makes no appeal to inherence in his analysis of accidental predication that he is not troubled by such examples. As he says at one point:

Things attributed to the same subject according to diverse forms are predicated of one another accidentally. Thus, [a] white [man] is said to be musical accidentally because whiteness and musicality belong to Socrates. (SCG 2.58.3.1344)

In this passage, Aquinas tells us that an accidental predication such as 'a white man is musical' is true not because a single form or property, *musicality*, inheres in an accidental unity such as white-Socrates. On the contrary, it is true because two "diverse" forms or properties, *whiteness* and *musicality*, both inhere in a single substance such as Socrates. And, of course, this is precisely what we would expect if he is thinking of accidental predication in terms of numerical sameness and constituency. For insofar as *whiteness* and *musicality* both inhere in Socrates, white-Socrates and musical-Socrates will share the same matter, and hence be numerically the same.

Although everything we've said so far about Aquinas's analysis of ordinary predication is correct as far as it goes, there are a few complications that must be taken into account if we are to have an accurate account of his views in their full generality.

## 6.4 Complications

Up to this point, we have been focusing on just a handful of ordinary predications—indeed, a single example of essential predication ('Socrates is human') and just two examples of accidental predication ('Socrates is white' and 'Socrates is musical'). Although each of these three predications can be said to conform to our above statement of Aquinas's analysis, there are other examples that cannot. Consider, for example, two further essential predications:

### Problematic Examples of Essential Predication

- (4) Socrates is material.
- (5) God is good.

As in the case of ‘Socrates is human’, each of these essential predications is a part of ordinary subject–predicate discourse. And yet, unlike ‘Socrates is human’, neither of them can be understood in terms of the identity of their subject with something possessing a property as a constituent. This is perhaps clearest in the case of (5). For insofar as God is absolutely simple, Aquinas denies that he has any proper parts or constituents, much less any constituent forms or properties. But of course if this is right, then the truth of ‘God is good’ cannot be understood, as our statement of Aquinas’s analysis requires, in terms of the identity of God with something having the property *goodness* as a constituent.<sup>22</sup>

As for the case of (4), it too would seem to depart from our statement of Aquinas’s analysis. For although Socrates does possess constituent forms or properties, the truth of (4) is not to be understood in terms of them. On the contrary, this predication characterizes Socrates in terms of his constituent matter rather than his constituent forms or properties.

In order to explain how Aquinas can make sense of predications like those at (4) and (5), we must introduce two refinements into our understanding of his analysis of ordinary predication. First, as the case of (4) makes clear, we must allow that things can be characterized by constituents other than their forms or properties. For just as Aquinas thinks that the form or property of *humanity* is that constituent in virtue of which Socrates is characterized as human, so too, he thinks, prime matter is that constituent in virtue of which Socrates is characterized as material. Up until now, we have been focusing primarily on *form* or *property* characterization, in large part because of the role that forms or properties play in the context of change (where they are what account for difference in characterization over time). But we must not let this focus blind us to the fact that things can be characterized by constituents other than their forms or properties, including their constituent matter. In order to accommodate the latter possibility, let us introduce the notion of an *F-making constituent* to cover any sort of constituent by which something can be characterized as an *F*. In that case, we can understand Aquinas’s views about ordinary predications of the form ‘*a* is *F*’ more broadly than we have until now—namely, as asserting the numerical sameness of their subject with something having some *F*-making constituent or other.

Although this first refinement resolves the difficulty raised by (4), it does not by itself resolve that raised by (5). For insofar as God is absolutely simple, he cannot be said to have any constituents whatsoever—at least if we are thinking of constituents as distinct from what they are constituents of. For the same reason, he cannot be said to be identical with any sort of good-making constituent, whether it counts as a property or not.

<sup>22</sup> See §8.1 and §8.3 for further discussion of Aquinas’s views about divine simplicity.

As with the previous difficulty, however, we can resolve this one by broadening our understanding of the sorts of constituents by which things can be characterized. Ordinarily, when we talk about constituents, or indeed parts of any kind, we are interested only in *proper* parts (where  $x$  is a proper part of  $y$  just in case  $x$  is a part of  $y$  and  $x \neq y$ ). In technical contexts, however, it is often useful to allow things to have *improper* as well as proper parts (where  $x$  is an improper part of  $y$  just in case  $x = y$ ). The current context is no exception. Indeed, if we help ourselves to the notion of an improper part, we can say that even God is identical to something having a good-making constituent—namely, himself. But if that is right, then it would seem we have a way of understanding Aquinas's views about ordinary predication that is broad enough to accommodate both (4) and (5). For now we can say that what is asserted by ordinary predications of the form ' $a$  is  $F$ ' is the numerical sameness of their subject with something having some  $F$ -making constituent as either a proper or improper part.

Note that the appeal to improper parthood, in this context, takes for granted the coherence of cases of what we might call *basic characterization*—that is to say, cases in which a subject (such as God) can be characterized as an  $F$  and yet there is no further explanation for such characterization. Initially, this sort of appeal might seem suspicious or ad hoc, something added simply to make sense of a special theological case. But a little reflection shows that such an appeal is, in fact, required even in cases where it seems that we can initially proceed without it. Consider again the predications at (1) and (4), which characterize Socrates in terms of one of his proper parts or constituents. It can still be asked why Socrates's constituent *humanity* makes him human (rather than, say, material), whereas his constituent prime matter makes him material (rather than, say, human). But, of course, to ask this is just to ask why such constituents can be characterized as  $F$ -making (rather than, say,  $G$ -making), for a relevant substitution of ' $F$ ' (and ' $G$ '). Presumably, however, there are no answers to such questions. The constituents in question just can be so characterized; end of story. Evidently, therefore, if anything is to be  $F$ -making, something must be  $F$ -making in the basic way. In short, cases of basic characterization must be possible.

Once we appreciate this point, I think we can see that basic characterization is implicated, for Aquinas, not only in predications about God, but also in predications involving classification or kind membership more generally. To mention just a few such examples:

#### Examples of Predication Involving Basic Characterization

- (6) Prime matter is non-individual.
- (7) A form is inherent.
- (8) Socrates is a substance.
- (9) White-Socrates is an accidental unity.

As the sheer variety of these examples helps to make clear, predications involving basic characterization can, in principle, have any sort of subject whatsoever (simple or complex, individual or non-individual, etc.).

The two refinements introduced so far are sufficient, I think, to cover all the problematic cases of essential predication. There is, however, at least one type of accidental predication that remains problematic. Consider, for example, an accidental predication involving an immaterial substance, such as the angel Gabriel:

#### **A Problematic Example of Accidental Predication**

(10) Gabriel is wise.

As with most of the other predications we've considered, this one appears to be part of ordinary subject–predicate discourse. Indeed, Gabriel is well known from the Bible, appearing in both the Old and New Testaments.<sup>23</sup> What's more, Aquinas thinks all angels have free will, where this includes (at least at one time) the ability to act against God, and hence to be foolish or unwise. For the same reason, (10) is a clear case of accidental predication for Aquinas.

The reason that this predication poses a difficulty for our statement of Aquinas's analysis of ordinary subject–predicate discourse is that it does not seem to fit what we have said so far about numerical sameness. Insofar as (10) is understood as an example of accidental predication, it seems to require that Gabriel is numerically the same as (but not identical to) something having the property of *wisdom* as a constituent—namely, wise-Gabriel. But up to this point, we have understood such sameness in terms of matter-sharing—or, more precisely, in terms of the sharing of prime matter. But neither Gabriel nor wise-Gabriel can be said to have any such matter. On the contrary, both are wholly immaterial beings—the former an immaterial substance and the latter an immaterial unity.<sup>24</sup> But if that is right, how are we to understand the claim that they are numerically the same?

As it turns out, there is a straightforward answer to this question. For even if Gabriel and wise-Gabriel cannot be said to share any prime matter in common, they can be said to do something analogous—namely, share the same substratum (or functional matter). For, insofar as Gabriel enters into some larger compound, he is himself the substratum (or functional matter) for that further compound. And if we allow that overlap with respect to any sort of matter, functional or otherwise, is sufficient for sharing the same substratum, then we can think of sharing the same prime matter as a special case of sharing the same substratum. Indeed, in light of this,

<sup>23</sup> In the Old Testament (Daniel 8–9), Gabriel appears to Daniel, explaining his visions. In the New Testament (Luke 1), he appears to both Zechariah and the Virgin Mary, foretelling the birth of John the Baptist and Jesus, respectively.

<sup>24</sup> See §8.2 for more details on Aquinas's views about immaterial substances and compounds.

we can broaden our understanding of the doctrine of numerical sameness without identity as follows:

**Numerical Sameness Without Identity—A More General Statement**

For any subjects  $x$  and  $y$ , where  $x \neq y$ , and any time  $t$ ,  $x$  is numerically the same object as  $y$  at  $t$  if and only if (i)  $x$  and  $y$  share the same substratum in common at  $t$ , and (ii)  $x$  and  $y$  are both individual.

Unlike our previous statement of the doctrine (§4.4), this one is not restricted to hylomorphic compounds. Even so, it must be noted that it still contains an important restriction. For, as the condition at (ii) makes explicit, it is restricted to individuals. This restriction is necessary to avoid the absurdity that prime matter is numerically the same object as some distinct compound of which it is a proper part (since prime matter shares the same matter or substratum with every such compound). Insofar as objects are individual, prime matter is not of the right ontological type to be an object, much less numerically the same as a distinct object.<sup>25</sup> Provided we understand accidental predication in terms of this more general statement of numerical sameness without identity, the example at (10) no longer raises any trouble.

We are now, I think, finally in a position to appreciate Aquinas's analysis of ordinary predication in its full generality. Taking into account all the refinements introduced so far, we can revise our earlier statement of this analysis as follows:

**Ordinary Predication—Thomistic Analysis Revised**

- *Predication in general*: Ordinary (intrinsic) predications of the form ' $a$  is  $F$ ' are more perspicuously represented as of the form ' $a$  is numerically the same as something,  $b$ , having an  $F$ -making constituent as a proper or improper part'.
  - *Essential predication*: Ordinary essential predications of the form ' $a$  is  $F$ ' are more perspicuously represented as of the form ' $a$  is identical to something,  $b$ , having an  $F$ -making constituent as a proper or improper part'.
  - *Accidental predication*: Ordinary accidental predications of the form ' $a$  is  $F$ ' are more perspicuously represented as of the form ' $a$  is numerically the same as (but not identical to) something,  $b$ , having an  $F$ -making constituent as a proper or improper part'.

And in light of this statement of Aquinas's analysis, we can make sense of all the various examples of predication we've considered, whether essential or accidental, basic or non-basic.

<sup>25</sup> Here I simply take for granted that objects are individual. But see §10.1 for a defense of this assumption.

## 6.5 Hylomorphism and Ordinary Objects

In previous sections, I have attempted to clarify the distinctive type of substratum theory to which Aquinas's hylomorphism gives rise, and in particular to show that it can preserve certain virtues of bare particularism while at the same time avoiding certain of its vices. Before concluding this chapter, I want to summarize the main results of these sections in a way that highlights their bearing on Aquinas's understanding of ordinary material objects—that is, lumps of bronze, statues, and human beings (as opposed to immaterial objects such as God and the angels). Doing so will serve two purposes. First, it will prepare the way for a comparison of Aquinas's hylomorphism with its main competitors in the contemporary literature, which are themselves typically offered as theories of ordinary objects. Second, it will enable us to anticipate some of the connections between Aquinas's hylomorphism and his views of material objects, without having to take a stand just yet on the precise relationship of the latter to ordinary objects.

The distinctiveness of Aquinas's hylomorphism, understood as a type of substratum theory, consists in three main things: (i) its account of the nature of substrata, and in particular its commitment to the view that non-individual stuff serves as the substratum for at least some of the properties associated with ordinary objects; (ii) its account of metaphysical structure, and in particular its appeal to two different types of complex to explain the different types of properties possessed by ordinary objects; and (iii) its account of the metaphysics of predication, and in particular its reliance on a relation of numerical sameness to provide a uniform treatment of statements of the form '*a* is *F*'. Drawing on these three things, we can describe the main elements of Aquinas's hylomorphism as follows:

### Thomistic Substratum Theory—The Main Elements

- (1) The relationship between ordinary objects and their properties is to be understood in terms of substratum-property complexes.
- (2) There are two different types of substratum-property complex:
  - (a) First-order complexes (i.e., complexes in which portions of stuff serve as the substratum for properties);
  - (b) Second-order complexes (i.e., complexes in which first-order complexes serve as the substratum for further properties).
- (3) The relationship between first- and second-order complexes is to be understood in terms of the doctrine of numerical sameness without identity, which for the case of ordinary objects can be stated as follows:

*Numerical sameness without identity:* For any complexes *x* and *y*, where  $x \neq y$ , and any time *t*, *x* is numerically the same material object as *y* at *t* if and only if *x* and *y* share all their stuff in common at *t*.

The first element in this description is intended to locate Aquinas's views within the class of substratum theories more generally, whereas the second and third elements are intended to highlight those features of Thomistic substratum theory that distinguish it from contemporary forms of substratum theory.

Although this description succeeds in identifying the main elements of Aquinas's views, it nonetheless ignores many details, including especially the precise relations among properties, characteristics, and their bearers. Since some of these details will become important later on, I will briefly summarize the most important of them as well.

First of all, note that apart from forms or properties, there are three main types of being appealed to by Aquinas's hylomorphism—namely, prime matter (or stuff), material substances (or first-order complexes), and accidental unities (or second-order complexes).<sup>26</sup> All three types can be said to *possess* properties in a strict and proper sense. Of these three, however, only material substances (or first-order complexes) can be said to possess properties both via constituency and via inherence. For only they *have* substrata and *serve as* substrata for properties. Strictly speaking, therefore, only material substances can be said to possess essential and accidental properties—since, as we have seen, only properties possessed via inherence can be accidental or contingent, whereas all properties possessed via constituency are essential or non-contingent. By contrast, prime matter (or stuff) possesses properties only via inherence, since it serves as a substratum for properties but has no substrata of its own, whereas accidental unities possess properties only via constituency, since they have substrata but don't themselves serve as substrata for any further properties. For the same reason, prime matter possesses only accidental or contingent properties, whereas accidental unities possess only essential or non-contingent properties.

Although only material substances *possess* both essential and contingent properties, for Aquinas, it does not follow that only they can be both essentially and accidentally *characterized* by properties. On the contrary, the same is true of accidental unities as well. Indeed, like material substances, accidental unities are characterized *essentially* by the properties they possess as constituents, and *accidentally* by the properties of distinct compounds with which they are numerically the same (but not identical). The only difference is that, unlike material substances, accidental unities are not numerically the same as other complexes by virtue of possessing properties via inherence or by entering into them as a proper part. For accidental unities do not serve as the substrata for any properties, and hence do not have any properties via inherence or enter into any larger complexes as proper parts.

What about prime matter? It is certainly not *essentially* characterized by any properties. For something can only be essentially characterized by a property it possesses via constituency, and prime matter possesses no properties in this way.

<sup>26</sup> It may help to refer again to Fig. 6.1.



Prime matter is also not *accidentally* characterized by any of the properties it possesses via inherence. For the only properties it possesses via inherence are substantial forms or properties, and only individuals can be characterized by them.<sup>27</sup> It might seem to follow that prime matter is not characterized by properties at all, either essentially or contingently. But in the end, this isn't quite right—for there would appear to be some properties, after all, by which prime matter can be characterized at least derivatively (and hence contingently). For even if prime matter, as non-individual stuff, isn't of the right ontological type or category to be characterized by the properties that it possesses via inherence (namely, its substantial forms or properties), the same cannot be said about certain of the properties possessed by its host substance (namely, the accidental forms or properties of the substance of which it is a constituent part). Indeed, since matter-sharing would seem to suffice for (derivative) property characterization wherever such characterization is possible, we might expect prime matter to be derivatively (and hence contingently) characterized by at least some such properties. And in certain cases this is plausible. Thus, even if prime matter cannot be human (in virtue of being a constituent part of something that is human), presumably it can still be a certain color, shape, or size (in virtue of being a constituent part of something that is a certain color, shape, or size). Indeed, Aquinas seems to be committed to saying this at least for the case of size. For, as we shall see (§8.3), he takes prime matter to be extended, and hence to fill a place of a certain size (namely, the size of the place filled by the material substance of which it is a part). At the same time, however, he also thinks that the precise size or extension of prime matter at any given time is determined by the quantitative properties or accidents of its host substance, and that this size can vary, within limits, as the quantitative properties or accidents of its host substance vary.<sup>28</sup> And there may be other sorts of cases as well.<sup>29</sup>

Finally, we must not forget that characterization can occur independently of any properties. Material substances, for example, are characterized not only by their constituent properties, but also by their constituent matter. And presumably something similar can be said of accidental unities, so that those which include prime matter as a constituent part can be characterized as material as well. And, of course, we must not forget that, in some cases (such as the non-individuality of prime matter), characterization is to be explained not by appealing to any proper parts or

<sup>27</sup> See again the discussion in §5.5.

<sup>28</sup> The latter point, about the very same prime matter varying in size or extension over time, is somewhat conjectural. But see the discussion in Wippel 2000, 372, which appeals to *Quod.* 9.6.1 (and Aquinas's views about intension and remission of forms more generally) as some justification for this conjecture. See also §11.3 for further discussion of the relationship between prime matter, quantities, and extension.

<sup>29</sup> Divisibility, for example, seems to be a characteristic that Aquinas takes prime matter to have not in itself, but only in virtue of being a constituent part of a quantified material substance. See, e.g., *In Sent.* 2.3.1.1.

constituents at all, but only to the being or entity itself that is being characterized and which is at best an improper part or constituent of itself.

If we keep in mind that prime matter is stuff, material substances are first-order complexes, and accidental unities composed of material substances are second-order complexes, we can describe the most important details concerning their properties and characteristics as follows:

#### **Thomistic Substratum Theory—Properties and Characteristics**

- (1) *Stuff*:
  - (a) Stuff possesses properties only via inheritance;
  - (b) Stuff cannot be characterized by the properties it possesses via inheritance, but it can be characterized primarily and essentially by itself (as an improper part) and derivatively and accidentally by the constituent properties of the second-order complexes of which it is a non-immediate proper part.
- (2) *First-order complexes*:
  - (a) First-order complexes possess properties both via constituency and via inheritance;
  - (b) First-order complexes are characterized primarily and essentially by the properties they possess via constituency, and derivatively and accidentally via the properties of the second-order complexes of which they are an immediate proper part.
- (3) *Second-order complexes*:
  - (a) Second-order complexes possess properties only via constituency;
  - (b) Second-order complexes are characterized primarily and essentially by the properties they possess via constituency, and derivatively and accidentally via the properties of any complexes (first- or second-order) with which they are numerically the same.

So much for the exposition of Aquinas's hylomorphism. Let us turn now to its defense in the context of contemporary theories of ordinary objects.

## In Defense of Hylomorphism

In Chapter 6, I explained how to understand the hylomorphism that emerges from Aquinas's theory of change—namely, in terms of a distinctive type of substratum theory whose precise contours have yet to be fully appreciated either by historians of philosophy or by contemporary metaphysicians. In this chapter, I further emphasize the philosophical significance of Aquinas's hylomorphism by offering a limited defense of its application to ordinary objects. The aim of my defense is twofold: (a) to demonstrate the systematic depth and explanatory power of Aquinas's views in the context of some familiar contemporary metaphysical debates, and (b) to anticipate some of the connections (to be explored more fully in Part IV) between his hylomorphism and his account of material objects.

My discussion in this chapter is divided into three parts. In the first part, I argue that Aquinas's hylomorphism enjoys some significant advantages over the standard contemporary form of substratum theory—namely, bare particularism. In the second part, I show how the very same aspects of Aquinas's hylomorphism that give it an advantage over bare particularism automatically provide an attractive solution to a range of puzzles that collectively go by the title 'the problem of material constitution'. In the third and final part of the chapter, I turn to certain issues having to do with the nature of intrinsic change and persistence. Here, too, I argue that Aquinas's views bring with them some significant advantages—including a novel and attractive solution to the problem of temporary intrinsics, as well as a satisfying account of a type of intrinsic change that is habitually ignored in the contemporary context (namely, substantial change). Indeed, we shall see that Aquinas's hylomorphism calls our attention to a new problem of change, one that deserves to be considered along with that of temporary intrinsics.

### 7.1 Bare Particularism and its Discontents

To appreciate the advantages that Aquinas's hylomorphism enjoys over bare particularism, we must first be clear about some of the strengths and weaknesses of bare particularism itself.

As noted in Chapter 6, bare particularism is one of two main contemporary types of constituent ontology, the other being bundle theory. Like bundle theorists, the proponents of bare particularism take for granted that ordinary objects are associated

with complex wholes that can be analyzed in terms of metaphysically more basic parts or constituents. Unlike bundle theorists, however, bare particularists do not take the metaphysically more basic parts of these complexes to include only properties. On the contrary, they insist that such parts also include a *sui generis* type of particular (namely, a bare particular) that serves as an underlying substratum for properties.

Of course, insofar as bare particularists insist on the need for more than one fundamental type of metaphysical part, they commit themselves to a theory of ordinary objects that is less parsimonious than that of the bundle theorists. Nonetheless, bare particularists have traditionally justified their commitment to both substrata and properties on the following three grounds.<sup>1</sup> First, this commitment enables us to preserve the common-sense distinction between properties and their bearers, and hence the intuition that they are fundamentally different types of being.<sup>2</sup> For insofar as we take the ultimate substrata to be bare particulars, it will follow straightforwardly that such substrata and properties themselves belong to different ontological types or categories.

Second, the commitment to both substrata and properties enables us to account for something that is difficult to make sense of on bundle theory—the possibility of distinct particulars sharing all the same properties.<sup>3</sup> On bundle theory, objects sharing all the same properties would appear to be one and the same object (since there is nothing else to distinguish them). On bare particularism, by contrast, objects sharing all the same properties can still differ with respect to their substrata.

Third and finally, the commitment to both substrata and properties enables us to analyze a class of predications whose members seem to require explanation, including each of the following:

#### Examples of Ordinary Predication

- (1) Socrates is human.
- (2) Socrates is white.
- (3) Socrates is musical.

We discussed this third motivation for substratum theory in some detail in Chapter 6. Indeed, there we saw that bare particularists have available to them more than one type of analysis of such predications. Thus, thin particularists analyze

<sup>1</sup> See esp. Loux 2006, ch. 3 and the references cited therein. See also Armstrong 1989 and 1997, Bailey 2012, and Loux 2010.

<sup>2</sup> At least in the basic cases. It's no part of bare particularism to deny that properties themselves can have properties.

<sup>3</sup> I say 'difficult' (not 'impossible') because there are trope-nominalist versions of bundle theory that allow for the possibility of distinct particulars sharing all the same properties in a loose sense. See Loux 2006 for further discussion.

them in terms of a subject term that refers to a bare particular, a predicate term that introduces a property, and a copula that functions as the 'is' of instantiation. By contrast, thick particularists analyze these same predications in terms of a subject term that refers to a substratum-property complex, a predicate term that introduces a property, and a copula that functions as the 'is' of constituency.

To be sure, bundle theorists have their own analyses of such predications to offer. On the most straightforward of these, such predications are analyzed along the lines suggested by thick particularists, except that their subject terms are taken to refer to complexes of properties alone rather than substratum-property complexes. Even so, as bare particularists of both varieties insist, such analyses are not consistent with the first two motivations mentioned previously.

Let us assume (though this is controversial) that the considerations just summarized identify some genuine advantages that bare particularism enjoys over bundle theory. And let us also assume (though this is even more controversial) that these same advantages are significant enough to outweigh the costs of including substrata in addition to properties among the fundamental types of metaphysical parts. Even granting these two assumptions, it cannot be denied that bare particularism faces a host of familiar difficulties. Not all of these difficulties are equally serious, and not all of them apply to all forms of bare particularism. Even so, I think it's fair to say that their cumulative weight threatens to eclipse the advantages that we are here assuming bare particularism to have.

Perhaps the most common complaint against bare particularism is that the notion of a bare particular (or a substratum more generally) is itself incoherent. Let us call this the 'classic objection'.<sup>4</sup> This objection takes as its point of departure the role that bare particulars are supposed to play in individuation—that of being a “numerical diversifier” of distinct objects sharing all the same properties. Now, in principle, there would appear to be no restriction on the properties that distinct objects can share in common. Hence, in order for bare particulars to play their distinctive role in individuation, it would seem that they must be capable of being combined with any properties whatsoever. But that is just to say that bare particulars must be such as to possess all of their properties contingently as opposed to essentially. It is precisely at this point that the classic objection enters the picture. For the notion of a being that lacks any essential properties has struck many as absurd:

[I]sn't having no properties essentially a property that is essential to anything that has it? And what about the property of being a numerical diversifier? Isn't that essential to the diversifier? (Loux 2010, 13)

And, of course, similar questions could be raised about the properties of *bareness* and *particularity*.

<sup>4</sup> See Loux 2010 and 2006, esp. 121–3. See also Bailey 2012.

The force of the classic objection has, in my opinion, been greatly exaggerated. There can be no doubt that bare particulars must be essentially *characterized* in various ways (including those just mentioned). But whether this implies that they must also have essential properties is a separate question, one whose answer depends in large part on one's conception of properties. On an *abundant* conception of properties, there is a distinct property corresponding to every distinct predicate, and hence one for every distinct way in which something can be characterized (unless perhaps it can be proven otherwise, say, by Russell's paradox). On a *sparse* conception of properties, by contrast, there is a distinct property corresponding only to a proper subset of such predicates, and hence one for only some of the distinct ways in which something can be characterized.<sup>5</sup>

Obviously, the fact that bare particulars can be essentially characterized in certain ways will imply that they have essential properties on the abundant conception, but not on the sparse conception. Indeed, on the sparse conception, such characterization might be expected to turn out to be basic.<sup>6</sup> Bare particularists have, I think, typically intended their views to be understood in the context of just such a sparse theory of properties.<sup>7</sup> In any case, provided we understand their views in this context, the main force of the classic objection can be avoided.

Having said that, the classic objection might still seem to identify a cost for bare particularism. For the proponents of this theory will, presumably, want to allow that there are essential properties corresponding to at least *some* cases of essential characterization. For example, bare particularists of both the thin and thick variety allow for the existence of substratum-property complexes, and these are almost always said to be essentially characterized by the properties they possess as immediate proper parts or constituents.<sup>8</sup> But if that is right, then the proponents of bare particularism owe us a principled account of the distinction between those cases of essential characterization that require essential properties and those that do not. Unless they can provide such an account (and it is not obvious that they can), the classic objection will still get some purchase on their views.

Another common complaint against bare particulars has to do with their alleged non-empirical character. Let us call this the 'empiricist objection'.<sup>9</sup> In its strongest form, this objection charges the friends of bare particularism with violating a crucial

<sup>5</sup> The terminology of abundant vs. sparse properties traces to D. Lewis. But my understanding is more in accord with that of Armstrong. See Schaffer 2004 for discussion and references.

<sup>6</sup> See again the discussion of basic characterization in §6.4. See also Schaffer (2004, 93–3), who notes that most proponents of the sparse conception postulate only those properties required to account for the objective similarities and causal powers of things.

<sup>7</sup> This is certainly true in the case of David Armstrong (1979, 1989, and 1997), perhaps the chief contemporary proponent of bare particularism. And hereafter I shall also assume that it is true in the case of other bare particularists.

<sup>8</sup> Indeed, as noted in §6.2 (n. 16), such constituent essentialism is sometimes regarded as a 'framework principle for constituent ontologies'. See Loux 2010.

<sup>9</sup> See Loux 2006 and Armstrong 1997.

methodological constraint on metaphysical theorizing—that of restricting the elements of fundamental ontology to only what can serve as the direct objects of experience. Although this version of the empiricist objection is important historically, it is weak philosophically. For it's hard to see why theoretical entities should, in principle, be excluded from fundamental ontology, especially if their postulation appears to be required to explain the empirical data.

Even if the empiricist objection in its strongest form gets no purchase on bare particularism, it can be reformulated in such a way as to cast doubt on a specific form of it—namely, thin particularism. For insofar as proponents of thin particularism identify ordinary objects with bare particulars, they would appear to be committed to saying that ordinary objects can't be directly experienced (since bare particulars can't be so experienced). Indeed, insofar as thin particularists accept such an identification, they would also appear to be committed to saying that ordinary objects lack essential properties (since again bare particulars seem to lack such properties). But as noted in Chapter 6 (§6.2), both of these consequences are highly counterintuitive. For claims such as the following (though perhaps not stated in precisely these terms) would appear to be among the deliverances of common sense:

#### Experience and Essential Properties

- (a) Socrates is a direct object of experience.
- (b) Socrates has at least some of his properties essentially (or non-contingently).

The consequences of rejecting either of these two claims are significant. But those associated with the rejection of (a) have, I think, provided the greatest source of discomfort for bare particularists historically.<sup>10</sup> Indeed, in the case of (b), many have simply been willing to reject the existence of the sorts of properties—often called *natural kinds*—that we pre-theoretically associate with the natures or essences of ordinary objects.<sup>11</sup>

It's worth noting that a determined thin particularist could attempt to avoid the consequences associated with the rejection of (a) by insisting that bare particulars can be directly experienced after all. Indeed, one could insist that the same theoretical considerations that warrant the postulation of bare particulars in the first place also warrant our taking them as the immediate objects of experience. Theodore Sider suggests this sort of response when he speaks of bare particulars as the subjects primarily characterized by the properties we associate with ordinary objects of experience: "Thin particulars have properties. They really do! Thin particulars may

<sup>10</sup> As noted in §6.2, such considerations motivate Armstrong (1997, §7.11) to embrace thick over thin particularism.

<sup>11</sup> See, e.g., Armstrong 1997, §4.3.

be red, round, juicy, whatever" (Sider 2006, 388). But even this sort of response would seem to represent a significant cost for the view.

Although at one time it was common for bare particularists to embrace a form of thin particularism, many now prefer to embrace a form of thick particularism—no doubt at least partly because doing so avoids the consequences just mentioned. For there would appear to be no reason to deny that thick particulars (or substratum-property complexes) can be direct objects of experience or possessors of essential properties. Insofar as thick particularists identify ordinary objects with thick particulars, therefore, they can uphold the truth of both (a) and (b).

Despite these advantages, even thick particularism appears to be seriously at variance with common sense in certain respects. For in addition to the intuitions supporting claims (a) and (b), we also have intuitions supporting claims such as these:

#### **Contingent Properties and Composition**

- (c) Socrates possesses at least some of his properties contingently (or non-essentially).
- (d) Socrates is human, but not composed of anything distinct from himself that is human.

And yet thick particularism appears to be in conflict with both (c) and (d). As noted in Chapter 6 (§6.2), insofar as Socrates is a thick particular (or substratum-property complex), and such particulars possess all their (non-relational) properties essentially, Socrates would seem to be not only essentially human, but also essentially a certain color, shape, size, and so on. As we can now see, moreover, insofar as Socrates's thin (or bare) particular instantiates humanity, it would seem to be human. But if Socrates himself is human and a thick particular (or complex) composed of this same thin particular, he would seem to be composed of an object distinct from himself that is human.

As in the case of (a) and (b), the consequences of rejecting either (c) or (d) are significant. And, once again, it is the consequences associated with the rejection of the first of these two claims that have, I think, provided the greatest source of discomfort historically. Indeed, in the case of (d), many take the increase in the number of ordinary objects that follows from its rejection to be an unavoidable consequence of mereology:

[A]n increase in the number of objects we recognize as existing is a familiar consequence of accepting mereology. It is not that when we embrace mereology we discover many new entirely distinct (or, one might say, entirely different) objects; rather, we discover many new partly overlapping objects, i.e., we discover proper parts, which are objects in their own right. (Paul 2002, 592–3)



Even in the case of (c), however, some thick particularists are perfectly willing to accept the consequences that follow from its rejection.<sup>12</sup> It is worth noting, however, that a determined thick particularist could avoid these consequences by embracing a form of counterpart theory. For according to counterpart theory, the contingency of property possession is to be understood in terms of the having of an appropriately similar object (i.e., a counterpart) in another possible world.<sup>13</sup> But, then, armed with this understanding of contingent property possession, one could grant that substratum-property complexes possess certain of their constituent properties contingently, even though there is no possible world in which they lack those same properties.

Although counterpart theory does provide friends of thick particularism with a way of upholding (c), and it is in fact the modal theory of choice for many contemporary philosophers, it cannot be denied that it too brings with it some significant costs. Indeed, for my part, the costs seem much greater than those that it's here being invoked to avoid. Not only does the analysis of modality in terms of similarity itself seem counterintuitive, as has often been noted,<sup>14</sup> but more importantly, such an analysis appears to undermine the sort of objectivity required by our pre-philosophical modal intuitions. For attributions of similarity and dissimilarity are notoriously context- and interest-relative.<sup>15</sup> In short, counterpart theory itself seems to run afoul of such claims as the following:

#### Objectivity of Modal Intuitions

- (e) Our modal intuitions are not relative to context or the interests of particular subjects.

And this, too, is a significant cost.<sup>16</sup>

One final point about (d). I have been speaking as if thick particularism were the only form of bare particularism that threatens to violate this claim, and hence to increase the number of ordinary objects in our ontology. In a recent article, however, Andrew Bailey has argued that the same threat arises for any form of bare particularism.<sup>17</sup> For whether we think of Socrates as a thin particular instantiating the property of humanity, or as a thick particular that exists in virtue of a thin particular

<sup>12</sup> As noted in §6.2, Armstrong simply defines the nature or essence of ordinary objects in terms of the conjunction of all their (non-relational) properties.

<sup>13</sup> Roughly, an object is contingently *F* just in case it has one or more such counterparts that are non-*F*. See D. Lewis 1986, esp. ch. 4.

<sup>14</sup> See Kripke 1980 and Plantinga 1974, esp. ch. 6.

<sup>15</sup> Loux 2010, 22.

<sup>16</sup> See Paul 2004 for a response to this objection and Loux 2010, 22–4 for a discussion of the costs incurred by this response.

<sup>17</sup> See Bailey 2012. Bailey doesn't clearly distinguish between thin and thick particularism, and speaks in places as if all bare particularists must be thick particularists. Still, all the points he makes are perfectly generalizable, and hence I shall present them as such.

instantiating humanity, we will get two humans where common sense tells us there is only one—namely, one that instantiates humanity and one that possesses humanity as an immediate proper part or constituent. And likewise for every other (non-relational) property possessed by Socrates (or, for that matter, by any other ordinary object). In short, bare particularists of both the thin and thick variety run into difficulty when it comes to accepting the following pair of claims:

#### Characterization and Counting

- (f) Particulars are always characterized by the properties they possess (whether such properties are possessed via instantiation or immediate proper parthood).
- (g) There is only one human in the place occupied by Socrates.

For insofar as bare particularists accept (f), they appear to be committed to rejecting (g). And again, this puts them seriously at variance with common sense.

As Bailey points out, however, the problem is not merely that bare particularism threatens to increase the number of ordinary objects in our ontology (though that is counterintuitive enough); it also threatens to undermine the possibility of ordinary objects being uniquely characterized by any of their (non-relational) properties. That is to say, insofar as bare particularists accept (f), they also appear to be committed to rejecting intuitive claims such as the following:

#### Uniqueness

- (h) There are at least some properties by which Socrates alone is characterized.

Of course, bare particularists could try to avoid the consequences of rejecting both (g) and (h) by rejecting (f) instead. But the prospects for doing so aren't very promising. Bailey himself seems to think that the rejection of (f) is inconsistent with the traditional motivation for bare particularism. I'm not persuaded by his argument, but I agree with him that such a rejection carries some significant costs. For the claim at (f) is itself highly intuitive. If a particular *a* possesses a property *F-ness*, then it is natural to infer that *a* is *F*. And the naturalness of this inference doesn't seem to depend on *how* exactly the property is said to be possessed—namely, via instantiation or immediate proper parthood. On the contrary, the fact that a particular can be characterized by a property possessed in either of these two ways is required to explain something taken for granted throughout our discussion to this point—namely, that bare particularism can be developed along both thin and thick particularist lines. For ordinary objects are obviously characterized by their properties. And yet thin and thick particularists disagree about the precise way in which such objects possess the properties by which they are characterized.

No doubt there are other difficulties or objections that could be raised against bare particularism, in one or more of its varieties. But we've seen enough, I think, to appreciate some of the main costs associated with this type of theory of ordinary objects. Indeed, we can summarize these costs by saying that there doesn't appear to be any form of bare particularism capable of preserving the conjunction of (a)–(h). It is precisely here, I think, that Aquinas's hylomorphism gains a significant advantage over bare particularism. For, as I shall now argue, it is capable of preserving all of the relevant claims.

## 7.2 Advantages over Bare Particularism

In what follows, I shall concern myself only with those aspects of Aquinas's hylomorphism that are relevant to his understanding of ordinary objects—that is, with what I referred to in Chapter 6 as *Thomistic substratum theory*.<sup>18</sup> Since these are the only aspects of Aquinas's hylomorphism that I shall be concerned with here, it will be useful to continue referring to them in this way. Exactly how Aquinas's broader hylomorphism is related to his understanding of ordinary objects is a topic that I shall return to in Part IV.

Like bare particularism, Thomistic substratum theory is a type of constituent ontology that appeals to both substrata and properties in its account of ordinary objects. Even so, it differs from bare particularism in three important respects: (i) its metaphysics of substrata (in particular, its appeal to non-individual stuff to serve as the ultimate substratum for ordinary objects); (ii) its metaphysics of property possession (in particular, its appeal to two different types of metaphysical structure or complex to explain the possession of properties by ordinary objects); and (iii) its metaphysics of sameness (in particular, its appeal to a form of numerical sameness without identity to explain the relationship between distinct complexes sharing the same stuff).

In spite of these differences, Thomistic substratum theory has the resources to uphold the traditional motivation for bare particularism, and hence would seem to enjoy whatever advantages this contemporary form of substratum theory enjoys over bundle theory. Thus, insofar as Thomistic substratum theory appeals to substrata, it can preserve the intuitive distinction between properties and their bearers. For substrata and properties obviously belong to different fundamental ontological types or categories.<sup>19</sup> And insofar as Thomistic substratum theory appeals to non-individual stuff to serve as the ultimate substratum for ordinary objects, it can also

<sup>18</sup> See again the summary of these aspects near the end of §6.5.

<sup>19</sup> Again, at least in the basic cases. See §11.3 for a theological context in which Aquinas allows properties to have properties.

preserve the intuitive possibility that distinct objects share all the same properties. For objects sharing all the same properties can still differ with respect to their stuff.<sup>20</sup>

Again, insofar as Thomistic substratum theory appeals both to different types of complex and to a relation of numerical sameness without identity, it has the resources to provide a uniform treatment of ordinary subject–predicate discourse, including each of the following:

#### Examples of Ordinary Predication

- (1) Socrates is human.
- (2) Socrates is white.
- (3) Socrates is musical.

As we saw in Chapter 6 (§§6.3–4), Aquinas analyzes these predications in such a way that both their subject and predicate terms refer to substratum–property complexes, and their copula functions as the ‘is’ of numerical sameness—with essential predications such as (1) being understood as identity statements, and accidental (intrinsic) predications such as (2) and (3) being understood as statements of numerical sameness without identity.

In addition to upholding the traditional motivation for substratum theory, Thomistic substratum theory can also avoid the classic objection to bare particularism. For as in the case of bare particularism, Thomistic substratum theory is to be understood in the context of a sparse theory of properties—in particular, one that allows substrata to be essentially characterized in certain ways (e.g., as numerical diversifiers) without requiring them to possess any essential properties corresponding to such characterizations. Indeed, here I think Thomistic substratum theory enjoys a distinct advantage over its contemporary rival. For unlike bare particularism, it has a principled way of distinguishing those cases of essential characterization that require the postulation of essential properties from those that do not.

What initially motivates the development of Thomistic substratum theory, as we have seen (Chs 3–4), is a particular analysis of change. According to this analysis, change is to be understood in terms of the generation and corruption of substratum–property complexes. And since such complexes essentially possess the constituent properties by which they are characterized, this analysis guarantees the existence of at least some cases of essential characterization in terms of essential properties. Even so, the Thomistic substratum theorist can insist that we ought to avoid postulating essential properties wherever possible, on grounds of theoretical parsimony or

<sup>20</sup> Since Aquinas thinks of all forms or properties as individual, it might seem that he would have no need to appeal to matter or stuff as an individuator. In fact, however, this is not the case. For reasons I cannot go into here, he thinks that even in the case of individual forms, we must appeal to matter or stuff to account for their numerical diversification. For further discussion, see Brower 2012a and 2012b, 97–8. See also Brower and Brower-Toldand 2008, §2.2.

simplicity. And since there appears to be no necessity for postulating such properties to explain essential characterization in the case of the ultimate substrata for ordinary objects (these substrata are not, for example, capable of being generated or corrupted), treating essential characterization differently in their case seems justified. What's more, essential characterizations involving substrata appear to be cases of classification or kind-membership. And, as we have seen (§6.4), such cases are naturally understood in terms of basic characterization.

The same considerations that enable Thomistic substratum theory to avoid the classic objection to bare particularism also enable it to avoid those difficulties that plague thin particularism. For insofar as ordinary objects are capable of change, they will have a substratum-property structure, and hence be identified with complexes (or concrete states of affairs). But, as we have seen, there is no reason to deny that substratum-property complexes can be directly experienced or that they possess at least some of their properties essentially. Like thick particularism, therefore, Thomistic substratum theory would appear to have an advantage over thin particularism insofar as it can uphold the intuitions at work in claims (a) and (b):

#### **Experience and Essential Properties**

- (a) Socrates is a direct object of experience.
- (b) Socrates has at least some of his properties essentially (or non-contingently).

Unlike thick particularism, however, Thomistic substratum theory does not assume that all the properties of ordinary objects are possessed by the same substratum. For the same reason, it can avoid one of the chief difficulties plaguing thick particularism—namely, commitment to saying that all the (non-relational) properties of ordinary objects are essential. Indeed, insofar as Thomistic substratum theory appeals to two different types of substratum-property complex to explain the possession of properties by ordinary objects, it can preserve the intuitive distinction between the possession of essential and accidental (or non-essential) properties without appealing to counterpart theory. In short, Thomistic substratum theory has an advantage over thick particularism insofar as it can uphold the intuitions at work in claims such as (c) and (e):

#### **Contingent Properties and Objectivity of Modal Intuitions**

- (c) Socrates possesses at least some of his properties contingently (or non-essentially).
- (e) Our modal intuitions are objective.

As it turns out, Thomistic substratum theory also has an advantage over thick particularism insofar as it can uphold claims such as (d):

**Composition**

- (d) Socrates is human, but not composed of anything distinct from himself that is human.

For unlike thick particularists, the Thomistic substratum theorist conceives of Socrates as a complex whose substratum is to be understood in terms of non-individual stuff. But as we have had occasion to note before (§5.5), non-individual stuff isn't of the right ontological type to be characterized by humanity. Only *individuals* can be human. Hence, even if Socrates is composed of something distinct from himself that *possesses* humanity (namely, his substratum), it will still be the case that only Socrates is *characterized* by this property. But, then, for the same reason, there is no danger of Thomistic substratum theory running afoul of (d).

Finally, because Thomistic substratum theory appeals to non-individual stuff to serve as the ultimate substrata of ordinary objects, it can also avoid the other difficulties facing bare particularism—namely, those associated with preserving the following three claims:

**Characterization, Counting, and Uniqueness**

- (f) Particulars are always characterized by the properties they possess (whether such properties are possessed via instantiation or immediate proper parthood).
- (g) There is only one human in the place occupied by Socrates.
- (h) There are at least some properties by which Socrates alone is characterized.

Because bare particularists of both the thin and thick variety conceive of all substrata as particular, their acceptance of the first claim puts pressure on them to reject the other two. But once this conception of substrata is abandoned in favor of one that allows substrata to be conceived of in terms of non-individual stuff, this pressure no longer remains. Thus, there is no threat, on Thomistic substratum theory, of multiplying humans or denying the possibility of their being uniquely characterized by at least some of their properties. On the contrary, human beings will be uniquely characterized by all of their constituent properties, and since such properties will always include their humanity, there will never be more than one human being occupying a single place.

It must be admitted, however, that there is a respect in which even Thomistic substratum theory threatens to multiply ordinary objects, and hence to undermine certain ordinary intuitions about the uniqueness of property possession. For, as we have seen, the Thomistic substratum theorist is committed to distinguishing two different types of substratum-property complex—namely, first-order complexes, such as Socrates, and second-order complexes, such as white-Socrates and musical-Socrates.

And even if the Thomistic substratum theorist can avoid saying there are two subjects characterized by the properties of first-order complexes (since only one of their property possessors is particular, the other being non-individual stuff), there seems to be no way for such a theorist to avoid saying this in the case of the properties of second-order complexes (since both of their property possessors are particular). In short, in accepting the claim at (f), Thomistic substratum theory appears to run into difficulties with claims that are exactly parallel to (g) and (h):

**Counting and Uniqueness Revisited**

- (g\*) There is only one thing that is white (musical, etc.) in the place occupied by Socrates.
- (h\*) There are at least some contingent properties by which Socrates alone is characterized.

And both of these claims, it might be said, are just as intuitive as the originals on which they are modeled.

Even if this objection could not be answered, it would not follow that Thomistic substratum theory is at any disadvantage relative to bare particularism. On the contrary, it would merely follow that, when it comes to a restricted class of properties—what Aquinas calls ‘accidental forms’ or ‘accidents’—both theories incur a significant cost (namely, a commitment to saying that there are twice as many objects characterized by these properties as common sense recognizes, and hence none characterized by them uniquely).

But even here, I think, Thomistic substratum theory has an important advantage over bare particularism. For although the proponents of both theories are committed to saying that, for every property included in the relevant class, there are *two substratum-property complexes* characterized by that property, only the Thomistic substratum theorist can say that there is nonetheless only *one material object* characterized by it. For in every case in which we have an object possessing an accidental form or property, the Thomistic substratum theorist will say that we have two complexes sharing the same matter or stuff. And, as we have seen, these are precisely the conditions under which complexes are said to be numerically one and the same material object.

In the end, therefore, it seems to me that Thomistic substratum theory succeeds not only in preserving the conjunction of (a)–(h), but also in preserving the most important intuitions behind claims like those at (g\*) and (h\*). With respect to the conjunction of all ten claims, therefore, I think it enjoys a significant advantage over bare particularism. Of course, Thomistic substratum theory does bring with it some substantial theoretical commitments—in particular, a commitment to (i) non-individual stuff, (ii) different types of substratum-property complex, and (iii) a type of numerical sameness without identity. With the possible exception of (iii), however, it seems to me that none of these commitments ought to significantly alter the appeal of

Thomistic substratum theory in the present context. For the commitment to non-individual stuff seems to me roughly on a par with (if not better than) the commitment to bare particulars.<sup>21</sup> And the commitment to different types of substratum-property complex seems to me a natural extension of commitments already latent within bare particularism. Indeed, many bare particularists are already prepared to allow for higher-order complexes (or states of affairs) in other contexts—for example, to explain causation or laws of nature.<sup>22</sup> Appealing to higher-order complexes in the context of property possession, therefore, would require little, if any, adjustment in the fundamental ontology of bare particularism.

Of all the Thomistic substratum theorist's commitments, I suspect that it is the appeal to a relation of numerical sameness without identity that bare particularists are most likely to balk at. But even here, I think, it would be a mistake to reject this commitment too readily, given what we've seen both of its role in preserving the conjunction of (a)–(h\*) and of how deeply entrenched in common sense the individual claims making up this conjunction are. But even for those who remain unconvinced, they need not part company with Aquinas just yet. For, as I shall now argue, the very same commitments that give his distinctive form of substratum theory an advantage over bare particularism—including, especially, the doctrine of numerical sameness without identity—immediately bring with them a number of further advantages, including a unified solution to two outstanding problems in the metaphysics of ordinary objects—namely, the problem of material constitution and the problem of temporary intrinsics.

### 7.3 Material Constitution

A number of different puzzles are commonly grouped together under the heading 'the problem of material constitution'. Among the most familiar are the Debtor's Paradox (also known as the Paradox of Increase), the Ship of Theseus Puzzle (also known as the Paradox of Replacement), the Body-Minus Argument (sometimes presented by way of Chrisippus's story about Dion and Theon, but more often by way of Peter Geach's story about Tibbles and Tib), and the Puzzle of Statues and Lumps (often presented by way of Allan Gibbard's story about Lump1 and Goliath). Despite their obvious differences, these puzzles all share a common structure: they appear to involve objects that both (i) share all the same matter (or material parts)

<sup>21</sup> I say 'if not better than' because whereas bare particulars appear to be mere theoretical postulates, possessing no direct support from common sense, the same does not appear to be the case with non-individual stuff. On the contrary, one of the standard arguments for stuff is that it essentially figures into our pre-theoretical conception of the world (as evidenced by the fact that ordinary language and thought are permeated with apparent reference to stuff which cannot be eliminated in favor of things). See in particular Markosian 2005 for a development of this sort of argument that takes for granted that all stuff is ultimately of a single type. See also Laycock 2006.

<sup>22</sup> See, e.g., Armstrong 1997.



and yet (ii) belong to different kinds, and hence possess different essential properties.<sup>23</sup> Insofar as these puzzles involve objects sharing the same matter, they are puzzles of *material constitution*. Indeed, we can just stipulate that an object *a* stands in the relation of material constitution to an object *b* at some time *t* just in case *a* and *b* share all the same matter at *t*.<sup>24</sup> Insofar as these same puzzles also involve objects possessing different essential properties, they are all *problematic*. For objects sharing the same matter would appear to be identical, whereas objects possessing different essential properties would appear to be distinct. And, of course, we can't have it both ways. Either constitution is identity or it isn't. But which is it?

We have met this problem before—namely, in Chapter 4, when we were discussing Aquinas's views about the relationship between a statue of the Greek goddess, Athena, and the lump of bronze from which this statue was produced. As we noted in the context of this discussion (§4.4), if we were to set our statue on an otherwise empty table and ask ourselves “How many objects are there on the table?” we would very likely find ourselves pulled in different directions—in the direction of saying “there is one and only one object on the table” and in the direction of saying “there are at least two objects on the table”. Let us now reflect a bit more carefully on the precise source of this tension, as it will help to clarify the problem of material constitution, as well as to highlight the distinctiveness of the Thomistic solution to it.

To begin, note that in our variation of the Statue and Lump Puzzle, there is good reason to accept each of the following claims:

#### Statues and Lumps—The Case of Athena

- (1) There is a statue on the table (namely, Athena).
- (2) There is a lump of bronze on the table that shares all the same matter as this statue (namely, the lump of bronze from which Athena was made).
- (3) Things sharing the same matter are identical (e.g., if we were selling Athena, we wouldn't charge for both a statue and a lump, but only for a single object).
- (4) Statues and lumps have different essential properties (e.g., Athena could not survive being melted down and recast as a sphere, whereas the lump of bronze from which Athena was made could survive this change).
- (5) Things with different essential properties must be distinct (e.g., insofar as the lump from which Athena was made could survive without Athena, it must be distinct from Athena).

<sup>23</sup> See Rea 1997. Another type of problem, which raises a significantly different set of issues but is sometimes referred to as a problem of material constitution, is the Problem of the Many. See Hudson 2001 for an influential statement.

<sup>24</sup> Although *sharing the same matter* is obviously a symmetrical relation, *material constitution* is often said not to be. See, e.g., Baker 2000. The reason for this, I suspect, is that in paradigm cases of material constitution, the objects that appear to share the same matter (e.g., lumps and statues) appear to do so in virtue of standing in some other relation that is non-symmetrical (e.g., proper parthood). But even if I'm wrong about this, the important point is this: *matter-sharing* alone is sufficient to raise the problem at issue, and hence is the one that I shall refer to hereafter as 'material constitution'.

Each of these claims is independently plausible. Indeed, that is an understatement—each is extremely intuitive, if not a deliverance of common sense. And yet the conjunction of these same claims entails a contradiction. For if we conjoin (1) and (2) with (3), we immediately get the conclusion that “there is one and only one object on the table” and hence that “constitution is identity”. But if we conjoin (1) and (2) with (4) and (5), we get the opposite conclusion—that “there are at least two objects on the table” and hence that “constitution is not identity”. And since a similar set of claims can be generated for each of the puzzles involving material constitution, we get the same problem in their case as well.<sup>25</sup>

In light of the foregoing, it should be clear that solving the problem of material constitution requires rejecting one (or more) of the claims that give rise to it. Moreover, since each of these claims is itself extremely intuitive, every solution will bring with it some significant costs. As we might expect, therefore, contemporary debates about material constitution have come to focus on which of these costs we ought to be willing to incur.

The standard solutions can be divided into four main types: eliminativism, co-locationism, the dominant-kinds solution, and the contingent-identity solution.<sup>26</sup> Eliminativists deny the existence of one or more of the types of objects that give rise to the problem (in this case, *statues* or *lumps*), and hence reject (1) or (2). Co-locationists allow for the co-location of ordinary material objects, and hence reject (3). Dominant-kinds theorists reject certain of our common-sense intuitions about the essential properties of ordinary objects, and hence reject (4). And finally, contingent-identity theorists deny certain of our intuitions regarding the necessity of identity, and hence reject (5).

Of these four types of solution, co-locationism remains one of the most popular. Indeed, it has been described in the literature as ‘the standard account’ of material constitution.<sup>27</sup> What is more, co-locationism is the type of solution that we might expect bare particularists to endorse. For, as we have seen, bare particularists are already committed to locating multiple objects of the same type in the same place—for example, two humans, two white things, and two musical things in the place occupied by Socrates. In fact, on the reasonable assumption that sharing the same bare particular is sufficient for co-location in the case of ordinary objects, bare particularists are already committed to co-locationism in the case of ordinary objects of the same type. But, then, presumably they will have no objection to co-locationism in the context of problems of material constitution (which always involves objects of different types). After all, if two objects of the same type (say, two statues or two lumps) can occupy the same place at the same time, why not two objects of a different

<sup>25</sup> For a defense of this claim, see Rea 1997.

<sup>26</sup> Again, see Rea 1997.

<sup>27</sup> Burke 1992.

type (say, a statue and a lump)—especially if both cases involve nothing more than the instantiation of certain properties by a single bare particular?<sup>28</sup>

It is not hard to appreciate the appeal of co-locationism. It doesn't repudiate any of the objects of common sense nor deny any of our intuitions about which essential properties such objects have or about the necessity of identity. At the same time, however, co-locationism flouts what many regard as one of the most firmly entrenched aspects of common sense—namely, the intuition that ordinary material objects cannot be co-located. Indeed, the strength of the intuition supporting this aspect of common sense is precisely what motivates many to reject co-locationism in favor of one of the other types of solution. Insofar as bare particularism flouts this aspect of common sense, therefore, we would seem to have further grounds for rejecting the standard contemporary form of substratum theory.<sup>29</sup>

Reflection on Thomistic substratum theory, and in particular its commitment to numerical sameness without identity, helps us to see that there is another type of solution available to substratum theorists that enjoys all the benefits of co-locationism but avoids its chief cost—namely, the co-location of ordinary material objects. Consider again the claim rejected by co-locationists:

#### **Sameness of Matter and Identity**

- (3) Things sharing the same matter are identical (e.g., if we were selling Athena, we wouldn't charge for both a statue and a lump, but only for a single object).

<sup>28</sup> Co-locationism is not only the preferred solution of many contemporary philosophers, but also the solution of choice for some of Aquinas's commentators. Indeed, in the most detailed study of Aquinas's views about material constitution to date, Christopher Brown attributes this solution to Aquinas. Although Brown grants that certain aspects of Aquinas's views about artifacts might suggest an eliminativist solution for *some* of the standard puzzles (such as the Ship of Theseus), he argues that Aquinas's views about material constitution in general (and statues and lumps in particular) are ultimately best understood in terms of a distinctive form of co-locationism. (See in particular Brown 2005, 144–67 and the further discussion of artifacts in Brown 2007b.) My reason for rejecting the co-locationist interpretation of Aquinas will become clear shortly.

<sup>29</sup> Philosophers sometimes suggest that what our common-sense intuitions require is not the rejection of co-located material objects in general, but only the rejection of co-located material *substances* in particular. (See, e.g., Brown 2005, 144–67 and Oderberg 2007, 168–9.) I think this suggestion is mistaken. If you ask an ordinary person to point out the substance on the table, he or she is likely to look for something along the lines of a smear of grease or oil. This suggests that we don't ordinarily think of substances as objects, much less as a specific type of object. And it would be odd to suggest that we have ordinary intuitions about the metaphysical notion of substance. In any case, as I indicate in the main text, I think it's clear that our common-sense intuitions about co-location extend to objects such as statues and lumps, regardless of whether they qualify as substances. For the same reason, I think Brown in particular is wrong to suppose that the form of co-locationism that he ascribes to Aquinas can preserve our common-sense intuitions on this score. (See esp. Brown 2005, 162, where he suggests that Aquinas would regard the co-location of statues and lumps as non-problematic on the grounds that only lumps qualify as substances.)

Ignoring for the moment the parenthetical support for this claim, note that the claim itself can be thought of as a conjunction of two others:

**Sameness of Matter and Identity Clarified**

- (3a) Things sharing the same matter are numerically the same material object (more precisely, if  $x$  and  $y$  share all the same matter at  $t$ , then  $x$  is numerically the same material object as  $y$  at  $t$ ).
- (3b) Distinct things cannot be numerically the same material object (more precisely, if  $x$  is numerically the same material object as  $y$  at  $t$ , then  $x = y$  at  $t$ ).

As in the case of (3), each of these claims is extremely intuitive—indeed, their intuitiveness explains why it's so natural to run them together. Still, it's important to distinguish them. For they provide us with different reasons for rejecting (3). Co-locationists deny that things sharing the same matter (e.g., statues and lumps) are the same material object. By contrast, the Thomistic substratum theorist insists that things sharing the same matter are the same material object, but allows for distinct things to be the same material object. In short, whereas co-locationists reject (3) on the grounds that (3a) is false, the Thomistic substratum theorist rejects (3) on the grounds that (3b) is false.

As the distinction between (3a) and (3b) helps us to see, co-locationism is just one species of a more general type of solution to the problem of material constitution—what we might call the *coincident-entities solution*.<sup>30</sup> Co-locationism provides us with one way of developing the coincident-entities solution. But Thomistic substratum theory provides us with another—what we might call the *numerical-sameness solution*, since it takes the coincident entities to be numerically the same material object.<sup>31</sup>

Like co-locationism, the numerical-sameness solution upholds our common-sense intuitions about which objects exist, what essential properties they have, and the necessity of identity. But unlike co-locationism—and this is the important point—the numerical-sameness solution also upholds our intuitions about the impossibility of

<sup>30</sup> I borrow this terminology from Rea 1997.

<sup>31</sup> As this description of the difference between co-locationism and the numerical-sameness solution helps to make clear, my interpretation of Aquinas shares much in common with that of Brown, despite our differences (see again nn. 28–9, this chapter). Like Brown, moreover, I'm inclined to think that certain aspects of Aquinas's views suggest an eliminativist response to at least some of the puzzles that raise the problem of material constitution. Indeed, if what I have said about his views of integral parts in Chapter 1 (§1.2) is correct, then none of the puzzles that appeal to such parts (such as Tibbles and Tib) will arise for Aquinas. Likewise, if what I will say about his views of artifacts in Chapter 9 (§9.4) is correct, then none of the puzzles that appeal to what I call *multi-piece* artifacts (such as the Ship of Theseus) will arise for him either. With respect to these puzzles, therefore, Aquinas's solution would best be described as eliminativist. Even so, since there is nothing in those aspects of Aquinas's views that I am referring to as *Thomistic substratum theory* that requires any form of eliminativism, and since the numerical-sameness solution itself has the resources to resolve all versions of the problem, I shall ignore these complications in what follows.

co-located material objects. And in this respect, it gains a significant advantage over the standard development of the coincident-entities solution.

To be sure, the numerical-sameness solution has its own share of counterintuitive costs. In this respect, it is like every other solution to the problem of material constitution. It seems to me, however, that the costs of rejecting (3b) are much less counterintuitive than those of rejecting (3a). For the intuitions supporting (3a) seem to me to be the ones most deeply entrenched in our common-sense picture of the world. For example, the standard reasons for accepting (3)—namely, that common sense counts objects by their matter, and hence repudiates the possibility of co-located material objects—support (3a) rather than (3b). Of course, common sense also enjoins us to accept (3b). But I think that it does so, at least partly, because it fails to recognize the technical, philosophical sortals (e.g., substratum-property complex) under which the objects of common sense must be counted as distinct. In any case, I think that it's much more likely that common sense would be mistaken about the truth of (3b) than (3a). Indeed, I think it's much more likely that common sense would be mistaken about the truth of this claim than it would be about any of the other claims comprising the problem of material constitution.

In short, the numerical-sameness solution seems to me to have a clear advantage over its competitors. And for the same reason, I think we have yet further reason to prefer Thomistic substratum theory over bare particularism, this time one specifically connected to its commitment to numerical sameness without identity.

Before leaving the problem of material constitution, it is worth noting that the attractiveness of the numerical-sameness solution not only gives Thomistic substratum theory an advantage over its chief rival among contemporary constituent ontologies, but also undercuts one of the main arguments for what is, perhaps, its chief rival among non-constituent ontologies—namely, temporal-parts theory.<sup>32</sup>

According to temporal-parts theorists, ordinary objects are completely lacking in metaphysical parts or constituents. Even so, such objects are said to possess, in addition to their ordinary material parts (or parts that are spread out in space), temporal parts (or parts that are spread out in time). Thus, to illustrate with our example of the statue: Athena is composed not only of parts such as a head, hands, arms, and legs, but also of instantaneous parts such as Athena-at- $t_1$ , Athena-at- $t_2$ , and Athena-at- $t_3$  that account for its existence over time. Indeed, on the standard development of temporal-parts theory, an ordinary object such as Athena just is the sum total of its parts over time.<sup>33</sup>

The claim that ordinary objects have temporal parts represents a significant departure from common sense. On our common-sense conception, such objects

<sup>32</sup> Strictly speaking, the form of temporal-parts theory that I am concerned with hereafter is what we might call *pure* temporal-parts theory—that is to say, the temporal-parts theory of philosophers such as David Lewis who reject metaphysical parts *in favor of* temporal parts. Although I won't bother to add the qualification 'pure' in what follows, it should be understood as implicit, since many constituent ontologists—including David Armstrong—accept the existence of temporal parts *in addition to* metaphysical parts.

<sup>33</sup> The doctrine of temporal parts is sometimes developed in such a way that ordinary objects are said not to be composed of distinct temporal parts ('worm theory'), but rather to be identical to temporal parts having counterparts at other times ('stage theory'). See Sider 2002 and 2000. In what follows, I focus only on the standard (worm-theoretic) development of the doctrine.

persist (or last over time) by being *wholly present* at each of the times they exist—that is to say, by *enduring*. But according to temporal-parts theorists, ordinary objects persist not by enduring but by *perduring*. That is to say, they persist by being *partly present* (or having a temporal part) at each of the times of their existence.

Temporal-parts theorists readily admit the costs associated with embracing their conception of persistence. But they often justify these costs at least partly on the strength of their solution to the problem of material constitution—and, in particular, its ability to preserve our intuitions about the impossibility of co-located material objects.<sup>34</sup>

Consider again our statue, Athena, and the lump of bronze from which it is made. And suppose we think of both, as the temporal-parts theorists do, as objects composed of temporal parts. In that case, we can say that these objects share many of their temporal parts in common. More specifically, we can think of the lump as an object composed of certain temporal parts—say, all and only those involving a certain bit of matter—and we can think of Athena as another object composed of a proper subset of these same temporal parts—say, all and only those shaped in a certain way. But if that is right, then for any time at which Athena exists at some place (say, on our otherwise empty table), it will be true that the lump exists there as well. And yet it will also be true that there is only a single object that exists at the relevant location—namely, the single temporal part that the statue and lump share in common. Of course, there will also be a sense in which two distinct objects exist there, insofar as our statue and lump are both *partly* present there. But this is no more problematic than two roads partly existing at some place where they overlap. In short, temporal-parts theory provides us with a way of solving the problem of material constitution without repudiating any of our common-sense intuitions about the impossibility of co-located material objects.

To see exactly how the temporal-parts solution is supposed to work, consider again our earlier statement of the Statue and Lump Puzzle and note that it gives us a way of rejecting (2) that does not entail any form of eliminativism:

#### Statues and Lumps—The Case of Athena

- (1) There is a statue on the table (namely, Athena).
- (2) There is a lump of bronze on the table that shares all the same matter as this statue (namely, the lump of bronze from which Athena was made).
- (3) Things sharing the same matter are identical (e.g., if we were selling Athena, we wouldn't charge for both a statue and a lump, but only for a single object).
- (4) Statues and lumps have different essential properties (e.g., Athena could not survive being melted down and recast as a sphere, whereas the lump of bronze from which it was made could survive this change).
- (5) Things with different essential properties must be distinct (e.g., insofar as the lump from which Athena was made could survive without Athena, it must be distinct from Athena).

<sup>34</sup> See, e.g., Sider 2002.

According to the temporal-parts theorist, the problem with (2) is not its commitment to lumps, or even to a lump that shares all the same matter as Athena at some time. Rather, the problem with (2) is its commitment to a lump that shares all the same matter as Athena (full stop).

Given the standard set of solutions, and the attraction of co-locationism, the problem of material constitution might well seem to provide support for temporal-parts theory. For the temporal-parts solution appears to avoid the chief cost of co-locationism, while at the same time preserving its other benefits. Of course, this solution does require us to reject our common-sense conception of persistence in favor of perdurantism. But temporal-parts theorists can insist that the costs associated with such a rejection are more than outweighed by those associated with co-locationism.

Even if this line of argument is compelling, Thomistic substratum theory provides us with a way of undercutting it. For, as we have seen, it calls our attention to a type of solution not included in the standard set—namely, the numerical-sameness solution—which not only avoids the chief costs of co-locationism and preserves its other benefits, but also avoids the rejection of our common-sense conception of persistence. Of course, temporal-parts theorists might insist that this latter cost is outweighed by the distinctive costs associated with the numerical-sameness solution—namely, commitment to both metaphysical parts and a relation of numerical sameness without identity. But here we must be careful, as a complication arises.

I have been speaking as if the mere appeal to temporal parts were sufficient to resolve all the various puzzles associated with the problem of material constitution, and hence as if temporal-parts theory itself represented a distinct type of solution in addition to those already considered (eliminativism, coincident entities, dominant kinds, and contingent identity). But, in fact, this is not the case. On the contrary, as Gibbard's famous variation on the Statue and Lump Puzzle is designed to show, there are certain puzzles of material constitution that temporal-part theory as such is powerless to resolve.<sup>35</sup>

To see why, let us briefly consider Gibbard's example of a statue of Goliath made out of two lumps of clay. At the very moment Goliath comes into existence, so too does a new lump of clay, Lumpl. At some later point in time, before the clay has completely dried, both Goliath and Lumpl are destroyed, thereby guaranteeing that they are composed of exactly the same temporal parts. But, then, if ordinary objects just are the sum total of their temporal parts, Lumpl and Goliath turn out to be identical after all. And for the same reason, Gibbard's example gives us a new

<sup>35</sup> See Gibbard 1975.

variation on the Statue and Lump Puzzle, one which the mere appeal to temporal parts is powerless to resolve:

**Statues and Lumps—Goliath and Lump1**

- (1\*) There is a statue on the table (namely, Goliath).
- (2\*) There is a lump of bronze on the table that shares all the same matter as this statue (namely, Lump1).
- (3\*) Things sharing the same matter are identical (e.g., if we were selling Goliath, we wouldn't charge for both a statue and a lump, but only for a single object).
- (4\*) Statues and lumps have different essential properties (e.g., Goliath could not survive being squashed and reshaped, whereas Lump1 could survive this change).
- (5\*) Things with different essential properties must be distinct (e.g., insofar as Lump1 could survive without Goliath, even though it does not, it must be distinct from Goliath).

In response to puzzles of this sort, temporal-parts theorists standardly appeal to counterpart theory in order to reject the claim that things with different essential properties must be distinct.<sup>36</sup> This appeal, in effect, commits temporal-parts theorists to a contingent-identity solution for the puzzles in question.<sup>37</sup> And although this commitment does enable temporal-parts theorists to resolve all the puzzles associated with the problem of material constitution, it obviously brings with it some serious further costs. Indeed, it would appear to commit temporal-parts theorists to repudiating our ordinary intuitions about the necessity of identity—or at very least to undermining the objectivity of such intuitions (as we saw earlier).

In the end, therefore, it appears that if we are going to choose between Thomistic substratum theory and temporal-parts theory, at least with respect to the problem of material constitution, we must consider not only the costs associated with appealing to metaphysical vs. temporal parts, but also the costs associated with appealing to numerical sameness without identity vs. counterpart theory. When presented in this way, I myself judge the costs associated with Thomistic substratum theory to be much less counterintuitive than those associated with temporal-parts theory. Of course, not everyone will share my intuitions on this score. Even so, I think it is safe to say that the mere possibility of developing the type of coincident-entities

<sup>36</sup> We saw earlier (n. 13, this chapter) how counterpart theory handles contingent property possession: roughly, an object has a property *F* contingently just in case it has one or more non-*F* counterparts. It handles essential property possession in a similar way: roughly, an object has a property *F* essentially just in case all of its counterparts are *F*. See again D. Lewis 1986, esp. ch. 4.

<sup>37</sup> See Rea 1997 and Sider 2002 for details.



solution associated with Thomistic substratum theory shows that the friends of temporal-parts theory have more work to do if they want to continue to insist that the problem of material constitution supports their own favored theory of ordinary objects.

As it turns out, however, the argument from material constitution is not the only argument for temporal parts that Thomistic substratum theory calls into question. It also casts significant doubt on what is perhaps the best-known argument for temporal-parts theory—namely, the argument from temporary intrinsics.

## 7.4 Temporary Intrinsics

The argument from temporary intrinsics, as originally formulated by David Lewis (1986), identifies an alleged problem for intrinsic change and then suggests that only the temporal-parts theorist has the resources for an adequate solution to it. To illustrate, suppose Socrates is seated in the morning (and so bent), but later in the afternoon decides to stand up (and so ceases to be bent and becomes straight instead). Such changes in shape are utterly familiar; but as Lewis points out, they seem initially problematic. For from the claim that Socrates is seated in the morning, it seems to follow that he is seated; and from the claim that he is standing in the afternoon, it seems to follow that he is standing. (And this on the general principle that to have a property at some time is just to have that property *simpliciter* and to exist at the time in question.) But, of course, nothing can be both seated and standing. How, then, can one and the same object, Socrates, have such different shapes at different times? According to Lewis, there are only three ways to solve the problem:

### Standard Solutions to the Problem of Temporary Intrinsics

- ( $\alpha$ ) Embrace presentism;
- ( $\beta$ ) Relativize property possession to times;
- ( $\gamma$ ) Accept the doctrine of temporal parts.

The first two solutions are open to endurantists, but the associated costs are so great, Lewis thinks, as to warrant their rejection in favor of the third solution.<sup>38</sup> Indeed, it is

<sup>38</sup> Lewis's original objections to the first solution were not particularly strong, and in fact denied that it was an endurantist solution at all. (See Lewis 1986, 204, where he explicitly says: "This is a solution that rejects endurance, because it rejects persistence altogether.") In later work, he still contrasts this solution with that of endurance, but also seems to recognize that endurantists can make use of it (see Lewis 2002, 2, esp. n. 3).

precisely for this reason that he famously described the problem of temporary intrinsics as the “principle and decisive objection against endurance”.<sup>39</sup>

Few now share Lewis's confidence that this problem unequivocally supports the doctrine of temporal parts. Even so, most continue to share his conviction that (α)–(γ) exhaust the live options for resolving it. In what follows, however, I argue that Thomistic substratum theory provides us with a further type of endurantist solution, one that not only avoids the usual costs, but is structurally identical to the temporal-parts solution preferred by Lewis and his perdurantist followers. As we shall see, moreover, the availability of this further type of solution—what I shall here call *Thomistic endurantism*—not only undercuts the best-known argument for temporal parts, but also seems to provide significant support for Thomistic substratum theory itself.<sup>40</sup>

In order to appreciate the Thomistic solution to the problem of temporary intrinsics, we must first be clear about the precise nature of the problem itself and how the standard solutions relate to it. To begin, therefore, let us return to our example involving Socrates and, following a standard convention, introduce a pair of technical terms—‘Socrates at  $t_1$ ’ and ‘Socrates at  $t_2$ ’—to refer, respectively, to Socrates when he is seated and to Socrates when he is standing. In that case, we can make precise the problem to which our example gives rise in terms of the following argument:

#### Argument A

- (1) Socrates at  $t_1$  is bent, whereas Socrates at  $t_2$  is straight.
- (2) Socrates at  $t_1$  = Socrates at  $t_2$  = Socrates.
- ∴ (3) Socrates is both bent and straight.

The truth of premise (1) seems to follow immediately from the general principle mentioned earlier, which we can state more perspicuously as follows:<sup>41</sup>

#### Property Possession at Times

- (P) For any object  $x$  and any property  $F$ , if  $x$  is, was, or will be  $F$ , then  $x$  is  $F$ .

<sup>39</sup> Lewis 1986, 204.

<sup>40</sup> Elsewhere (Brower 2011), I have referred to this solution more generally as *Aristotelian endurantism* or *the constituent solution*. But, as I suggest in this same context (885, n. 4), although I think this solution does trace to Aristotle, I owe my understanding of it largely to Aquinas. In this section of the chapter I attempt to make good on the promissory note there to “show that this form of substratum theory is, in fact, Aquinas's own”.

<sup>41</sup> See Rea 2003, esp. §2. This principle is at least initially plausible on eternalism.

Since the terms ‘Socrates at  $t_1$ ’ and ‘Socrates at  $t_2$ ’ just appear to be alternative names for Socrates, the truth of premise (2) would seem to follow as well. But, of course, the conjunction of (1) and (2) immediately gives rise to the absurdity at (3). Hence the problem.

Since Argument A is valid, the only way to avoid the absurdity to which it gives rise is to reject one of its premises. But which one should we reject? It is generally assumed that endurantists have no choice but to reject the first. For given endurantism, it is hard to see what terms like ‘Socrates at  $t_1$ ’ and ‘Socrates at  $t_2$ ’ could refer to, if not to Socrates himself.<sup>42</sup> But what could be wrong with premise (1) from the endurantist perspective? There are two—and apparently only two—answers. Premise (1) either presupposes a mistaken philosophy of time (or tense), or it presupposes a mistaken view of property possession. The first answer corresponds to the presentist solution, whereas the second corresponds to the relativizer solution. Let us look briefly at each.

*The presentist solution.* According to presentism, only the present is real. Hence, the only properties that ordinary objects have are those which they have in the present. Thus, in the morning, it is true that Socrates is bent (since now he *is* sitting), but false that he is straight (since he is not yet standing, though later he *will be*). In the afternoon, by contrast, it is true that Socrates *is* straight (since now he *is* standing), but false that he is bent (since he is no longer sitting, though earlier he *was*). And similar remarks apply to Socrates at other times. In short, given presentism, it is never true that Socrates *is* (*was*, or *will be*) both bent and straight. Hence, endurantists who embrace this doctrine can allow that persisting objects possess genuinely incompatible properties at different times without contradiction precisely because they reject the general principle at (P).<sup>43</sup>

*The relativizer solution.* Not all endurantists are willing to reject (P). But how do those who accept it avoid saying that Socrates is both bent and straight? The short answer is by relativizing the possession of such properties to times. Some insist that the temporal relativization traces to the properties themselves.<sup>44</sup> Others insist that it traces not to the properties but to the nature of their possession.<sup>45</sup> And yet others insist that it traces neither to the properties nor to their possession, but rather to the nature of the states of affairs (or propositions) into which objects enter by virtue of possessing such properties.<sup>46</sup> But however the temporal relativization is explained,

<sup>42</sup> See Merricks 1994.

<sup>43</sup> Strictly speaking, the rejection of (P) does not require embracing presentism. On the contrary, the rejection of (P) requires only that one take tense seriously—that is to say, accept the view that the fundamental truths about the world are all tensed. But since one can, in principle, do that without embracing presentism, the presentist solution is sometimes thought of as a species of a more general type of solution—the *serious-tenser solution*. Even so, since the rejection of (P) apart from presentism is typically thought to be unmotivated, we can ignore this complication here. See Zimmerman 1998 and Rea 2003 for discussion of non-presentist forms of the serious-tenser solution and the problems they face.

<sup>44</sup> Mellor 1981, 110–14.

<sup>45</sup> Johnston 1987.

<sup>46</sup> Haslanger 1989.

the basic solution is the same. Premise (1) of Argument A fails to get off the ground precisely because it assumes that properties are had *simpliciter* rather than *relative to times*.

Both of the standard endurantist solutions just described preserve the coherence of intrinsic change, but only at a significant cost. The presentist solution appears to be inconsistent with our best science, as well as to violate the thesis that truth supervenes on being.<sup>47</sup> And the relativizer solution appears to flout fundamental intuitions about property possession. Intuitively, ordinary objects possess at least some of their properties *simpliciter*—so that, say, Socrates just is bent or straight (full stop).<sup>48</sup> It is, of course, precisely these sorts of cost that Lewis and his perdurantist followers take to support the rejection of endurantism in favor of the doctrine of temporal parts. Since accepting this latter doctrine constitutes the other standard solution to the problem of temporary intrinsics, we must consider it briefly as well.

*The temporal-parts solution.* According to Lewis, the problem with Argument A comes not with premise (1) but with premise (2) Socrates at  $t_1$  = Socrates at  $t_2$  = Socrates. Once we have rejected the other solutions, Lewis thinks, we have no choice but to accept that bentness and straightness are genuinely incompatible properties possessed by distinct objects.<sup>49</sup> Since we have stipulated, in the context of Argument A, that the object possessing bentness is Socrates at  $t_1$  and the object possessing straightness is Socrates at  $t_2$ , it follows that we must reject premise (2) on the grounds that these objects are distinct. But, then, what are these objects and what is their relationship to Socrates, the ordinary object that we have been assuming to persist throughout the change? The answer, according to Lewis, is that Socrates at  $t_1$  and Socrates at  $t_2$  are temporal parts of Socrates, who is himself a four-dimensional space–time worm—that is to say, an object that persists by perduring (rather than enduring).<sup>50</sup>

Initially, this solution might appear to avoid the contradiction of a single object's possessing incompatible properties only at the cost of denying intrinsic change altogether. For if Socrates at  $t_1$  and Socrates at  $t_2$  are the only objects that possess the properties of bentness and straightness, in what sense can Socrates himself be said to change with respect to these properties? The answer, according to Lewis, is that while it is true that only Socrates's temporal parts possess bentness and straightness *simpliciter*, nonetheless Socrates himself can be said to possess these same properties

<sup>47</sup> See Rea 2003 and Sider 2000. See also Bigelow 1996 for an account of how truth could supervene on being for a presentist.

<sup>48</sup> Again, this is not to deny that Socrates can have bentness or straightness at particular times. Rather, it is to say that, intuitively, his bentness or straightness at these times is to be understood in terms of his bentness or straightness *simpliciter* together with his existence at the times in question. See Merricks 1994.

<sup>49</sup> See Lewis 1986, 204: "Third solution: the different shapes, and the different temporary intrinsics generally, belong to *different things*" (emphasis added).

<sup>50</sup> Again, see Lewis 1986, 204: "Endurance is to be rejected in favour of perdurance. We perdure; we are made up of temporal parts, and our temporary intrinsics are properties of these parts, wherein they differ from one another."

in a derivative or relative sense. Thus, just as a road can be said to be derivatively both bent and straight, in virtue of possessing spatial parts that are bent or straight *simpliciter*, so too in the case of Socrates and his temporal parts.<sup>51</sup>

Famously, this answer opens Lewis up to a *tu quoque* charge—namely, that his solution does no better than the relativizer's in preserving fundamental intuitions about property possession.<sup>52</sup> As already noted, our ordinary intuitions are that Socrates possesses bentness *simpliciter*, not by virtue of standing in some relation to it (say, by having its possessor as a temporal part). To say otherwise, as Lewis sometimes puts it, is to *alienate* objects from their properties. But, then, isn't such alienation equally a problem for Lewis's temporal-parts solution? Lewis denies that it is—and this for two reasons. First, unlike the relativizer solution, which alienates *all* objects from their properties, he claims that his still allows for at least *some* objects to possess their properties *simpliciter* (namely, temporal parts). Second, and once again in contrast to the relativizer solution, he claims that his solution does not *fully* alienate even ordinary objects from their properties. For given the special relationship between such objects and their temporal parts, there is a sense in which we can say that even they possess their properties *simpliciter*:

In talking about what is true at a certain time, we can, and we very often do, restrict our domain of discourse so as to ignore everything located elsewhere in time. Restricting the domain in this way, your temporal part at  $t_1$  is deemed to be the whole of you. So there is a good sense in which you do, after all, have *bent simpliciter*. The protagonist of endurance cannot say the same. (Lewis 2002, 5)

I do not want to pause here to evaluate the success of Lewis's replies or the alleged superiority of his temporal-parts solution over the standard endurantist alternatives.<sup>53</sup> Instead, I shall proceed directly to showing that, contrary to what Lewis here suggests and others habitually take for granted, it is possible to develop a type of endurantism that enjoys all the benefits of the temporal-parts solution without its chief cost—namely, the rejection of our common-sense conception of persistence.

*Thomistic endurantism.* As we have just seen, the key to Lewis's temporal-parts solution is a certain account of intrinsic change. According to this account, change has a very specific structure. First of all, there are the temporary intrinsics, properties such as bentness and straightness, which are genuinely incompatible and serve as that with respect to which persisting objects change. Secondly, there are the primary bearers of these properties, such as Socrates at  $t_1$  and Socrates at  $t_2$ , which are the beings characterized by these properties *simpliciter*. Third and finally, there

<sup>51</sup> See Lewis 1988, 66: "To be sure, my shapes belong *in the first instance* to my stages [or temporal parts], and *in a derivative, relational way* to the whole of me. Persisting thing  $x$  is bent at time  $t$  iff some stage of  $x$  is at  $t$  and is bent" (emphasis added).

<sup>52</sup> Haslanger 1989.

<sup>53</sup> But see Sider 2000 and 2002 for a stage version of temporal parts theory designed to avoid the alienation objection.

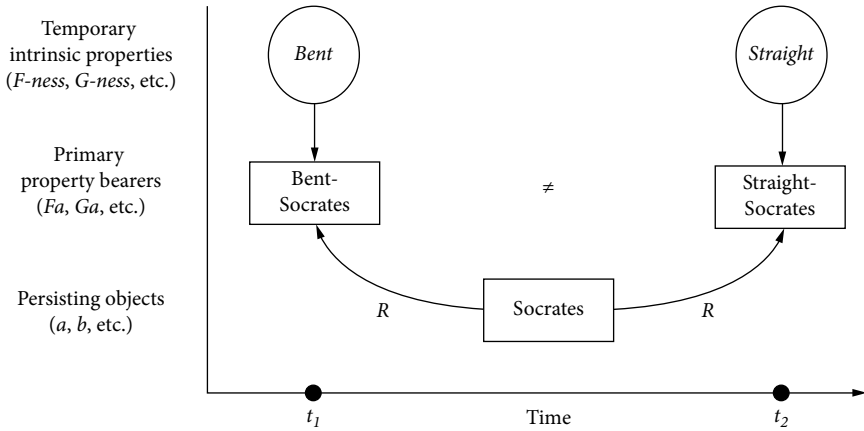


Figure 7.1 Lewis's Structural Account of Intrinsic Change

are the persisting objects themselves, such as Socrates, which are characterized by these properties only derivatively or by virtue of bearing an appropriate relation to their primary bearers. For the sake of clarity we can illustrate this structural account of change as indicated at Fig. 7.1.

It is important to see that this structural account does not, by itself, provide us with a full-blown theory of intrinsic change. To provide that, it must be supplemented with an account of the nature of both (i) the different types of object involved in any given change (the primary property bearers and persisting objects), and (ii) the relation between these different types of objects that explains why one of them (the persisting objects) possesses the relevant temporary intrinsics only derivatively. It is here, of course, that Lewis's doctrine of temporal parts becomes important, for it provides just the sort of supplementation needed. Thus, as we have seen, Lewis identifies the primary property bearers with temporal parts, persisting objects with complex (four-dimensional) objects composed of such parts, and the relevant relation with parthood.

There can, I think, be little doubt that the doctrine of temporal parts provides us with *one way* of filling out Lewis's structural account of intrinsic change. The important point for our purposes, however, is that it does not provide *the only way* of doing so. On the contrary, there is nothing in this structural account to prevent us from identifying persisting objects with enduring objects, provided we think of such objects as possessing their temporary intrinsics derivatively, and hence by virtue of bearing an appropriate relation to distinct objects which themselves possess the same properties *simpliciter*. Of course, we will not be able to think of these distinct objects as temporal parts. Still, there is nothing to prevent us from appealing to the relation

of parthood to account for the fact that persisting objects possess their temporary intrinsic properties derivatively. Indeed, if we think of the primary property bearers as complex objects having persisting objects as proper parts or constituents, we will have a type of solution that is both endurantist and structurally identical to Lewis's. In fact, we will have Aquinas's own preferred solution.

As we have had occasion repeatedly to note, Aquinas analyzes all intrinsic change in terms of an enduring substratum (or matter) successively taking on distinct properties (or forms), and thereby successively entering into distinct complexes (or hylomorphic compounds). Thus, when Socrates goes from being seated to standing, Aquinas will regard this as just a particular instance of his more general analysis of change—namely, one in which Socrates himself, a first-order complex (or material substance), serves as the substratum for (an accidental) change, and hence successively takes on the distinct properties (or accidents) of bentness and straightness, and thereby successively enters into distinct second-order complexes (or accidental unities)—namely, seated-Socrates and standing-Socrates. Indeed, we can usefully refer to these latter two compounds as 'Socrates at  $t_1$ ' and 'Socrates at  $t_2$ ', respectively. For doing so brings out the close connection they have to the temporal parts of Lewis's perdurantism. Like temporal parts, such complexes (or accidental unities) alone are characterized in the primary sense (or essentially) by the properties that they possess *simpliciter*; and likewise, ordinary objects are characterized by these same properties only derivatively (or accidentally) by virtue of bearing the appropriate mereological relationship to them. Unlike Lewis's temporal parts, however, these complexes are not proper parts of ordinary objects. On the contrary, they are complex wholes of which ordinary objects are proper parts.

As all of this makes clear, Aquinas's own preferred account of intrinsic change is structurally identical to Lewis's. Indeed, like Lewis, he identifies relation  $R$  with parthood. But whereas Lewis takes the entities referred to by expressions such as 'Socrates at  $t_1$ ' and 'Socrates at  $t_2$ ' to be proper parts of ordinary objects, Aquinas reverses the direction of  $R$ , and thinks of these same entities as complex wholes of which ordinary objects (and their temporary intrinsics) are proper parts.

Elsewhere I have argued that the Thomistic solution to the problem of temporary intrinsics is open to anyone (including bundle theorists, contemporary substratum theorists, and hylomorphists more generally) prepared to analyze change in terms of objects successively entering into larger wholes of which they and their temporary intrinsics are proper parts or constituents.<sup>54</sup> For present purposes, however, what is most important is that the structural identity of this type of solution to Lewis's own enables the Thomistic substratum theorist to reap all of the benefits of the temporal-parts solution while at the same time avoiding its chief cost—namely, its rejection of

<sup>54</sup> See again Brower 2011.

our ordinary conception of persistence. Note in particular that the two solutions appear to be on a par when it comes to the alienation objection. Like Lewis, the proponent of this type of solution can claim to preserve the intuition that at least some objects (namely, complexes) are characterized by their properties *simpliciter*, and hence avoid the alienation of *all* objects from their properties. Indeed, like Lewis, the Thomistic substratum theorist can also claim to preserve the intuition that even ordinary persisting objects possess their properties *simpliciter*, and hence avoid *fully* alienating even these objects from their properties. For insofar as Thomistic endurantism takes ordinary objects (such as Socrates) to be numerically the same as objects that possess their properties *simpliciter* (such as seated-Socrates or standing-Socrates), there is a clear sense in which they just *are* the objects possessing properties in this way.<sup>55</sup>

For all these reasons, we might expect the Thomistic solution to appeal to Lewis himself. For even if we grant that his temporal-parts solution is superior to the two standard forms of endurantism, its conception of persistence is still counterintuitive enough for him to “welcome a fourth solution”:

If the third solution alone is tenable, then our common-sense belief in persisting things commits us implicitly to perdurance—and this despite the fact that some of us firmly reject the notion of temporal parts (except of events or processes) and many more have never heard of it! It would be better not to impute such surprising commitments to common sense. (Lewis 1988, 67)

To Lewis and his followers in this regard, I recommend Thomistic endurantism as providing the desired “fourth” solution.

## 7.5 Substantial Change

I have been arguing that the theory of change underlying Thomistic substratum theory provides us with a novel and attractive solution to the problem of temporary intrinsics—one that not only avoids the usual costs of endurantism (namely, presentism and the relativization of property possession) but also the chief cost of temporal-parts theory (namely, the rejection of our common-sense conception of persistence). I now want to argue that this same theory brings with it one final advantage—the ability to account for the familiar (but nowadays sorely neglected) phenomenon of substantial change.

In the contemporary literature, the problem of temporary intrinsics is often treated as *the* problem of intrinsic change. From the perspective of Thomistic substratum theory, however, it raises a problem for just one specific type of change—namely, accidental change. For the problem of temporary intrinsics deals only with intrinsic

<sup>55</sup> As noted previously (§4.4, §6.3), Aquinas's views enable us to distinguish the ‘is’ of predication from the ‘is’ of numerical sameness without identity, the latter of which appears to be implicated in many ordinary assertions of the form ‘*a* is (an) *F*’. See also Brower and Rea 2005 for further discussion of this claim.



properties that characterize their subjects temporarily. But according to the Thomistic substratum theorist, all such properties are accidental, and hence all changes involving them are likewise accidental.<sup>56</sup>

In addition to such accidental changes, the Thomistic substratum theorist insists that there are also changes of another type—namely, substantial changes. These are the changes by which ordinary substances themselves come into or pass out of existence. And from the perspective of common sense, they are just as familiar as changes in shape or color. Indeed, such changes include that by which an oak tree comes to be from an acorn, as well as that by which such a tree eventually ceases to exist—say, when it is cut down and used for firewood. Again, such changes include that by which Socrates comes to be from a fertilized egg or zygote, as well as that by which he later dies, leaving behind a lifeless body or corpse. As in the case of accidental changes, all these changes would appear to involve a persisting subject—that is, something that can be said to gain or lose certain properties. What makes them difficult to explain, however, is that the properties gained and lost in their case (such as *being an oak tree* or *humanity*) appear to be incapable of characterizing any subjects temporarily. Thus, to recall a passage from Aquinas quoted previously (§4.1):

When a human comes to be, we can truly say not only that it was previously not human, but also that it previously was not (full stop). (*In Phys.* 1.12.10)

And the reason for this, as noted in the same context, appears to be the following: if a subject is characterized by a substantial form or property (such as *humanity*) at any time at which it exists, then it must be characterized by that same form or property at every time at which it exists.<sup>57</sup>

In short, familiar cases of substantial change call our attention to a type of intrinsic change whose possibility is rarely, if ever, considered in the contemporary literature. And the difficulty of making sense of this type of change would seem to have nothing to do with temporary intrinsic characterization. On the contrary, we can think of substantial change as raising a special problem of its own:

#### **The Problem of Substantial Change**

- (1) There are substantial changes—that is, intrinsic changes by which ordinary substances come into being or pass out of existence.
- (2) Intrinsic change always involves a persisting subject that gains or loses some properties.
- (3) The properties gained or lost in substantial changes do not characterize their subjects contingently, much less temporarily.

<sup>56</sup> The case of human death, as well as the Incarnation of Christ, raises complications for some of the claims I make in what follows. I return to such complications in Ch. 13 (see esp. §13.6).

<sup>57</sup> Again see Ch. 13 (esp. §§13.4–6) for complications.

One could, of course, respond to this problem by simply denying one of the claims at (1)–(3). But the denial of any of these claims brings with it at least some costs. The first claim appears to be a deliverance of common sense—if not a Moorean fact, then at least one deeply entrenched in our pre-theoretical conception of the world. The second claim appears to be part of our ordinary analysis of intrinsic change, and indeed is taken for granted by both endurantists and perdurantists in the context of the problem of temporary intrinsics. And the third claim appears to be demanded by our intuitive understanding of essential properties of ordinary objects or substances.

Once again, I submit that it is an advantage of Thomistic substratum theory that it can preserve all three claims. All that is needed, for their preservation, is a type of substratum that can temporarily *possess* certain intrinsic properties without ever being *characterized* by them. And, of course, insofar as Thomistic substratum theory conceives of the substratum for substantial change in terms of non-individual stuff, which is of the wrong ontological type or category to be characterized by the properties it possesses (via inherence), it provides us with just what is needed.

## 7.6 Final Scorecard

This completes my limited defense of Aquinas's hylomorphism, and in particular those aspects of it that comprise what I have been referring to as *Thomistic substratum theory*. Let us briefly take stock of where things stand.

I began this chapter by arguing that Thomistic substratum theory has some significant advantages over its chief rival among contemporary forms of constituent ontology—bare particularism. More specifically, I attempted to show that Thomistic substratum theory not only preserves the traditional motivation for bare particularism, but also avoids the chief difficulties attending its particular ontology of ordinary objects. I acknowledged that Thomistic substratum theory does have its own share of counterintuitive consequences, including especially those that follow from its commitment to the doctrine of numerical sameness without identity. But, as I also proceeded to argue, these costs are more than outweighed by the fact that they automatically bring with them unified solutions to two outstanding problems facing any systematic metaphysics of material objects—namely, the problem of material constitution and the problem of temporary intrinsics.

In the course of developing Thomistic solutions to these two problems, I also argued that the Thomistic substratum theory enjoys some significant advantages over its chief rival among contemporary forms of non-constituent ontology—temporal-parts theory. More specifically, I attempted to show that Thomistic substratum theory preserves much of the traditional motivation for temporal parts without thereby embracing counterpart theory or abandoning our common-sense conception of persistence and change. Finally, I argued that Thomistic substratum theory calls our attention to a new problem of intrinsic change, one which it is uniquely situated to resolve—namely, the problem of substantial change (or non-temporary intrinsics).

On the strength of these considerations, I find Thomistic substratum theory, not to say the broader hylomorphism of which it is a part, quite appealing. The main drawbacks seem to come from its commitment to metaphysical parts (or structure), non-individual stuff, and a relation of numerical sameness without identity. But I find these commitments more attractive than those associated with either bare particularism or temporal-parts theory. For although the friends of bare particularism can avoid commitment to non-individual stuff and numerical sameness without identity, they can do so only at the cost of commitment to bare particulars, co-locationism, and the denial of the conjunction of the common-sense claims at (a)–(h\*). And although the friends of temporal-parts theory can avoid commitment to metaphysical parts and numerical sameness without identity, they can do so only at the cost of commitment to temporal parts and counterpart theory. In short, the advantages of Thomistic substratum theory seem to me to outweigh its disadvantages.

I realize that not everyone will share my assessment when it comes to the proper weighting of these costs and benefits. But such is to be expected when we reach the point at which argumentation is done, and good judgment is called for. In any case, it would be unreasonable to expect more. My hope is that the argument of this chapter has at least made it clear that Thomistic substratum theory provides us with an account of ordinary objects that possesses considerable explanatory depth and power—indeed, one that deserves to be considered alongside the main contemporary contenders for the best account of the metaphysics of ordinary objects.

## PART IV

# Material Objects



## 8

# From Hylomorphism to Material Compounds

In Parts II–III (Ch. 3–7), I examined Aquinas’s theory of change and hylomorphism with a view to understanding his ontology of the material world. In Part IV (Chs 8–10), I fill out this ontology by examining Aquinas’s account of material objects. Since Aquinas did not leave us with any independent treatises on the topic, my project in this part will require some reconstruction. Nonetheless, we shall see that it is possible to extract from his writings something that metaphysicians today would recognize as a well-developed theory of material objects—indeed, one that represents a wholesale alternative to the standard accounts on offer in the contemporary literature.

In this chapter, I provide the background necessary for understanding the precise connection between Aquinas’s hylomorphism and his account of material objects. I begin by clarifying the nature of hylomorphic compounds themselves, focusing on the distinctive type of composition associated with them. I then proceed to offer a systematic classification or taxonomy of the main types of hylomorphic compound that populate Aquinas’s ontology, focusing in particular on those that possess prime matter. For lack of a better term, I refer to such compounds as *material compounds*. My goal in this chapter is to illuminate a host of concepts central to Aquinas’s Metaphysics and Natural Philosophy (including hylomorphic compound, materiality, and corporeality), as well as to indicate how Aquinas’s views about material compounds differ from those of a number of his own contemporaries—in particular, those who embrace a doctrine that has come to be known as *universal hylomorphism*.

## 8.1 Hylomorphic Composition

In previous chapters (esp. Chs 4–6), I have argued that hylomorphic compounds are best conceived of as complexes (or concrete states of affairs) that exist in virtue of some form (or property) inhering in some matter (or substratum). For the sake of the discussion to follow, it will be useful once again to have before us an illustration of this conception, using a diagram of the sort that is by now utterly familiar (see Fig. 8.1).

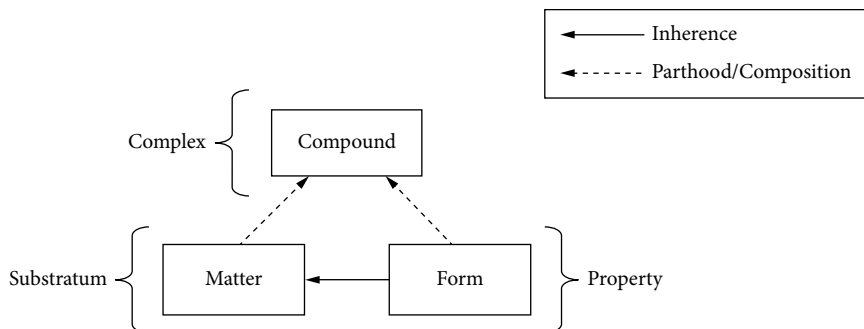


Figure 8.1 Hylomorphic Compounds

Insofar as the conception of hylomorphic compounds represented in this diagram admits of further specification, we can think of it as Aquinas's "general" conception of such compounds. It is important to emphasize that the notion of matter presupposed in this general conception is a purely functional one, and hence contrasts with what Aquinas takes to be matter in the strict and proper sense—namely, *prime matter*.<sup>1</sup> As we shall see, these two different notions of matter are crucial for understanding the various types of hylomorphic compound that Aquinas distinguishes. Before turning to the latter, however, I want to say a few words about the distinctive type of composition that is common to all hylomorphic compounds.

Contemporary philosophers have devoted considerable attention to questions about composition. In the context of material objects, much of this attention has specifically focused on what Peter van Inwagen (1990) dubs *the special composition question* (or SCQ for short).<sup>2</sup> Informally, this question asks for the conditions under which two or more objects compose a further object. More formally, it asks for an informative account of the necessary and sufficient conditions under which some objects, the *xs*, are such that there exists a further object, *y*, composed of the *xs*.

So understood, it is customary to distinguish three types of answer to the SCQ—*nihilism*, *universalism*, and *restricted composition*. According to nihilism, the existence of two or more objects is never sufficient to compose a further object. In other words, composition does not (perhaps even cannot) occur and hence there are far fewer objects in the world than common sense would lead us to believe (only simple objects). According to universalism, by contrast, the existence of two or more objects is always sufficient to compose a further object. In other words, there are no restrictions whatsoever on composition and hence there are many more objects in the world than common sense would lead us to believe (including objects whose parts

<sup>1</sup> See again the discussion of functional hylomorphism in §3.3 and §5.1, and the discussion of prime matter in §§5.4–5.

<sup>2</sup> Van Inwagen (1990, 20) refers to the question in this way to distinguish it from a more general question about the nature of composition itself.

are widely scattered across space and time). Finally, according to restricted composition, the existence of two or more objects is sometimes, but not always, sufficient to compose a further object. In other words, there are important restrictions on composition and hence the number of objects in the world is, ideally, much closer to what common sense would have us believe (and presumably includes both simple and complex objects, but none whose parts are widely scattered).

When it comes to hylomorphic compounds, I think it is clear that Aquinas accepts a form of restricted composition. In fact, I think the sorts of restrictions that he places on hylomorphic composition are precisely those that contemporary defenders of facts (or concrete states of affairs) place on constituency, which further justifies thinking of Aquinas's hylomorphic compounds in terms of facts (or concrete states of affairs).<sup>3</sup> In order to see that this is the case, it will be useful to approach Aquinas's views indirectly—that is to say, by reflecting on some of the different ways in which universalism can be formulated and which of these Aquinas himself is committed to accepting or rejecting.

Although universalism is standardly introduced in the context of material objects, the doctrine itself is often spoken of in perfectly general terms. Indeed, following the standard practice, I have been speaking as if the mere existence of two or more *xs* is all that is required, on universalism, for there to be some *y* composed of them—what is often referred to as the *sum* or *fusion* of the *xs*. In order to capture this general understanding of universalism, we can formulate the doctrine more precisely as follows:<sup>4</sup>

#### Universalism (Full Generality)

For any non-overlapping beings, the *xs*, regardless of their ontological type or category, there exists a further being, *y*, composed of the *xs*.

There are philosophers who accept universalism in its full generality.<sup>5</sup> In the context of debates about material objects, however, there is typically a tacit restriction on the scope of this doctrine.<sup>6</sup> Thus, the philosophers who endorse it typically mean to be committing themselves only to arbitrary sums or fusions of *material beings*—that is, ordinary material objects and their parts, as well as spatio-temporal regions, if there are any. In this context, therefore, it is perhaps better to formulate universalism along the following lines:

<sup>3</sup> See McDaniel 2009b for helpful discussion of constituency or fact-composition.

<sup>4</sup> I follow van Inwagen's (1990) formulation of universalism in requiring the parts of sums or fusions to be non-overlapping, but this is not strictly necessary. See Markosian 2008 for discussion of an equivalent formulation without this restriction that is often found in the literature.

<sup>5</sup> See, e.g., D. Lewis 1991, 75.

<sup>6</sup> The same can be said of the SCQ.



**Universalism about Material Beings**

For any non-overlapping material beings, the *xs*, there exists a further material being, *y*, composed of the *xs*.

Of course, insofar as this more restricted understanding requires commitment to objects with parts widely scattered across space and time, it will still be seriously at variance with common sense.<sup>7</sup> Even so, it is important to emphasize that the doctrine in this form is widespread in the contemporary literature, with its truth being taken for granted in standard formulations of the logic of parts and wholes.<sup>8</sup>

So far so good. But what about Aquinas himself? Does he accept universalism in either of these forms? There can, I think, be little doubt that Aquinas rejects universalism in its full generality. Indeed, this is required by his commitment to the theological doctrine of divine simplicity. I will have more to say about the importance of this doctrine for Aquinas's understanding of material compounds in §8.3. For now, however, we need only note that this commitment of Aquinas's entails not only that God lacks proper parts or constituents, but also that God himself does not serve as a proper part or constituent of any other object. As Aquinas himself says, in no uncertain terms, near the end of his treatment of divine simplicity in the *Summa Theologiae*: "It is impossible for God to enter into composition with anything in any way whatsoever" (*ST* 1.3.7).

What about universalism with respect to material beings? Here, too, I think it's clear that Aquinas rejects the doctrine. Even so, we must be careful. For there is one specific type of material being with respect to which Aquinas appears to be committed to the truth of universalism. Thus, as I noted in the context of discussing his views about the compounding and dividing of prime matter (§5.4), Aquinas appears to accept the following principle:

**Universalism about Portions of Prime Matter**

For any distinct, non-overlapping portions of prime matter, the *xs*, there exists a further portion of prime matter, *y*, composed of the *xs*.

Even if Aquinas is committed to this form of universalism, and hence universalism about one type of material being (namely, prime matter), I think it is safe to assume that he rejects universalism about material beings as such. For insofar as the matter and form of ordinary material objects qualify as material beings, the latter would

<sup>7</sup> For the same reason, van Inwagen (1990, 61) refers to universalism (so understood) as an "extreme" answer to the special composition question.

<sup>8</sup> See, e.g., D. Lewis 1991, where universalism is given as one of only three axioms in terms of which the theory as a whole is formulated (although Lewis himself refers to it as the doctrine of 'unrestricted composition' rather than 'universalism'). See also Simons 1987.

require him to say that arbitrary pairs of matter and form always compose a further object, regardless of how else they are related. But for reasons that I shall now explain, this seems extremely implausible.

Suppose that two and only two material substances exist—a particular human being, Socrates, and a particular horse, Bucephalus. In that case, universalism about material beings would guarantee the existence of at least the following four sums or fusions for Aquinas:

#### **Fusions of Matter and Form**

- (a) The fusion of Socrates's prime matter and Socrates's humanity.
- (b) The fusion of Bucephalus's prime matter and Bucephalus's equinity.
- (c) The fusion of Socrates's prime matter and Bucephalus's equinity.
- (d) The fusion of Bucephalus's prime matter and Socrates's humanity.

Given what we have seen of Aquinas's views, we would expect only the first two members of this list to count as hylomorphic compounds for him. For only they have matter and form related in the appropriate way—namely, via inherence. But if Aquinas accepted universalism with respect to material beings as such, he would have to say either (i) that the other two members of this list, as well as arbitrary fusions of matter and form more generally, also count as hylomorphic compounds, or else (ii) that hylomorphic compounds are a proper subset of the class of all fusions of matter and form. To my knowledge, Aquinas never refers to any arbitrary fusions of matter and form, much less refers to them as hylomorphic compounds. On the contrary, he seems to take for granted that the only objects composed of matter and form are those whose form inheres in their matter—and indeed seems to refer to all and only these objects as hylomorphic compounds.<sup>9</sup>

If I am right about this, then Aquinas would seem to be committed to rejecting both (i) and (ii). Such a rejection is, in fact, what we might expect, given the historical context. For with the exception of the 12th-century philosopher, Peter Abelard (d. 1142), universalism about material beings appears to have enjoyed almost no direct support during the medieval period, and Abelard himself was severely criticized for holding it.<sup>10</sup> This is not, perhaps, surprising given how counterintuitive the

<sup>9</sup> As we shall see (§13.6), Aquinas's views about the Incarnation of Christ ultimately force him to admit one case in which we can have, at least temporarily, an object composed of matter and form not related via inherence. But the object in this case (namely, Christ himself) cannot be regarded as an arbitrary sum or fusion of matter and form. Moreover, the exceptional nature of this case merely reinforces the suggestion that in all other cases objects are composed only of matter and form related in the appropriate way.

<sup>10</sup> See Arlig 2011, §2.1:

Abelard is one of the rare medieval philosophers who insist that any two items can constitute a discrete integral whole (see *Dialectica* 548.19–22). This puts Abelard in the company of many modern mereologists...but it sets him apart from most medieval philosophers.

doctrine itself is. In any case, I am not aware of anything in Aquinas to suggest that he is prepared to depart from common sense in this regard.

In short, there is good reason to think that Aquinas would reject both (i) and (ii), and no good reason to think that he would accept either. I conclude, therefore, that Aquinas rejects universalism about material beings in general, as well as any distinction between hylomorphic compounds and mere fusions of matter and form.

If this understanding of Aquinas's views is correct, then it should be clear he accepts a form of restricted composition about hylomorphic compounds. Indeed, the restriction that he places on hylomorphic composition would appear to be exactly that placed by contemporary philosophers on the type of composition (or constituency) associated with facts.<sup>11</sup> For just as a bare particular and a property compose a fact when and only when the property is instantiated by the bare particular, so too, Aquinas thinks, matter and form compose a hylomorphic compound when and only when the form inheres in the matter.<sup>12</sup>

So much for Aquinas's conception of hylomorphic composition. Let us now return to his distinction between functional and prime matter, and to the different types of hylomorphic compound to which this distinction gives rise.

## 8.2 Immaterial vs. Material Compounds

When Aquinas uses the term 'matter' in a purely functional sense, he does so in order to pick out something that plays the role of a substratum, regardless of its specific ontological type. But as we have seen (§5.2), he spells out the relevant functional role in different ways in different contexts. In the context of his Natural Philosophy or Physics, he spells it out in terms of an enduring subject of change: here substrata are beings that can acquire or lose distinct forms or properties over time. In the context of his Metaphysics, by contrast, he spells out this same functional role more broadly in terms of a subject of inherence: here substrata are merely beings that can have forms or properties inhering in them, regardless of whether they can acquire or lose such properties over time, and hence regardless of whether they can undergo any change with respect to such properties.

As we have also seen (§5.3), Aquinas thinks there are two different types of being that can play the functional role associated with substrata (regardless of how this role is spelled out)—namely, prime matter and substances. When prime matter plays the role of a substratum, it combines with a substantial form or property to compose a material substance. By contrast, when a substance plays this same role, it combines with an accidental form to compose an accidental unity. And, of course, the distinction between these two different types of substrata (or functional matter) corresponds

<sup>11</sup> Again, see McDaniel 2009b for details.

<sup>12</sup> See again the discussion of the relationship between inherence and composition in §3.5.

to Aquinas's division of the two main types of hylomorphic compound. (See again the representation of Aquinas's complete hylomorphism at Fig. 5.4 in §5.5.)

Insofar as all hylomorphic compounds—and hence all material substances and accidental unities—possess some type of substratum (or functional matter), there is a sense in which they all qualify as material. But qualifying as “material” in this purely functional sense is not sufficient for possessing matter in the ordinary, familiar sense of the term, since there is nothing to prevent the existence of wholly immaterial substrata. Indeed, Aquinas thinks that the possibility of accidental change in incorporeal (or spiritual) substances requires the existence of such substrata. Consider an angel, Gabriel, who acquires a new thought or volition. In this context, Gabriel serves as the “matter” for the change, the mental states that he successively takes on serve as the “forms”, and the complexes (or accidental unities) that exist in virtue of his possessing the relevant mental states serve as the “hylomorphic compounds”. Even so, Aquinas insists that neither Gabriel nor the accidental unities of which he is a part qualify as material in anything other than a purely functional sense:

If the term ‘matter’ is used in the sense [of prime matter]—which is its proper and common sense—it is impossible for there to be matter in spiritual substances . . . On the other hand, if the terms ‘matter’ and ‘form’ are used for any two things that are related as potentiality to actuality, then there can be no objection (unless it is a mere verbal dispute) to saying that there is both matter and form in spiritual substances. (QDSC 1.300–302, 357–360)

As Aquinas here concedes, there is a purely functional sense in which anything that serves as subject for change—indeed, anything that serves as a substratum for a form or property, and hence is related to it as potentiality to actuality—can be described as material.<sup>13</sup> But as he also makes clear, only compounds possessing prime matter—that is, matter in the primary or proper sense—qualify as material in the more robust, ordinary sense of the term; for it is only compounds of this sort that can be said to populate the ordinary material world.<sup>14</sup>

In short, there is a distinction to be drawn, for Aquinas, between what we might call material and immaterial compounds. The former class includes (a) all and only material substances (since all and only such substances are composed of prime matter), and (b) all and only those accidental unities that have material substances for a substratum (since all and only such unities have a substratum composed of prime matter). As this last point makes clear, the class of accidental unities can itself be further subdivided depending on whether the substances serving as their substrata are material or not. For the sake of completeness, let us introduce the terms *material unity* and *immaterial unity* and represent this further subdivision as indicated at Fig. 8.2.

<sup>13</sup> As noted in §3.3, Aquinas specifically introduces the notions of potentiality and actuality to emphasize the functional roles associated with matter and form.

<sup>14</sup> As noted in §4.2, this is why Aquinas often reserves ‘matter’ for prime matter alone, introducing the term ‘subject’ to refer to substances, which qualify as matter in the purely functional sense.

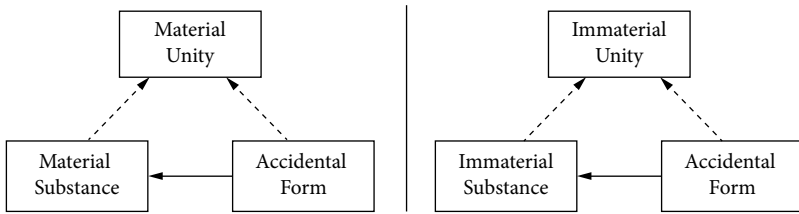


Figure 8.2 Two Types of Accidental Unity

In light of this further subdivision, we can characterize the distinction between material and immaterial compounds more precisely as follows:

#### Material vs. Immaterial Compounds

- *Material compound* =<sub>def</sub> A hylomorphic compound possessing prime matter—that is, a material substance or a material unity.
- *Immaterial compound* =<sub>def</sub> A hylomorphic compound lacking prime matter—that is, an immaterial unity.

Of these two notions, that of a material compound is obviously the one most important for understanding Aquinas's account of material objects. Hence, it is the one that I shall focus on in the chapters to follow. Before closing this chapter, however, I want to look briefly at Aquinas's notion of an immaterial compound, since this will enable us to highlight an important connection that he takes to hold between prime matter and corporeality—one that distinguishes his views from those of many of his contemporaries.

### 8.3 Corporeal vs. Material Compounds—Universal Hylomorphism

As the foregoing suggests, Aquinas's hylomorphism (and, in particular, his views about immaterial unities) takes for granted the following assumption:

#### Assumption about Hylomorphic Compounds

- (A) There can be hylomorphic compounds lacking prime matter.

On the face of it, this assumption seems perfectly coherent. Indeed, as the case of angelic change makes clear, all it requires is the possibility of an immaterial substance serving as the substratum for a distinct form or property.<sup>15</sup>

<sup>15</sup> Although Aquinas sometimes speaks as if immaterial substances, such as angels, themselves qualify as hylomorphic compounds (see again, the passage from *QDSC* 1 quoted in §8.2), it is important to emphasize

Even so, in Aquinas's own time the coherence of (A) was far from uncontroversial. Medievals agree (almost to a person) that God is both immaterial and incapable of serving as the substratum for any distinct forms or properties.<sup>16</sup> The explanation for this agreement is complicated, as different authors stress different reasons for it.<sup>17</sup> But it appears to be rooted in a certain understanding of the doctrine of divine simplicity, one which (as already noted in the case of Aquinas) was standardly taken to exclude not only the existence of any proper parts in God (such as matter and form), but also the possibility of God's entering as a proper part into any larger wholes or complexes (not to say, hylomorphic compounds in which he serves as the substratum for a distinct form or property).

Given this general consensus, medieval debates about the coherence of (A) focused on the question as to whether there could be any wholly immaterial created substances that could serve as a substratum for distinct forms or properties. As we have seen, Aquinas takes the answer to be 'yes'. But a host of other 13th- and 14th-century philosophers and theologians took the answer to be 'no'—including Bonaventure (c.1217–1274), John Peckham (c.1230–1292), Richard Middleton (c.1249–1303), and Peter John Olivi (c.1247–1298), among many other "Augustinians". Such figures thereby endorsed what has come to be known in the contemporary literature as the doctrine of universal hylomorphism.<sup>18</sup>

According to universal hylomorphism, there is one and only one immaterial substance—namely, God.<sup>19</sup> By contrast, all other substances—including not only angels, but also human souls—are material, and hence literally composed of prime matter. It is sometimes suggested that the contemporary name for this doctrine is misleading, insofar as the doctrine itself does not apply to all substances, but is rather restricted to substances of a specific type (namely, all and only created substances).<sup>20</sup> As I've described the doctrine, however, we can see that there is a sense in which its name is perfectly appropriate. For although it's true that this doctrine does not provide a hylomorphic analysis of all substances, it is still universal in the sense that it provides a uniform analysis of all hylomorphic compounds. Indeed, the proponents of this doctrine think all hylomorphic compounds must be composed

that, strictly speaking, it is only the accidental compounds or unities into which such substances enter (what I am calling immaterial unities) that qualify as hylomorphic compounds—that is, complexes of "matter" (or substrata) and "form" (or properties). Immaterial substances are, by contrast, simple substances.

<sup>16</sup> Although Aquinas does mention, as an exception to the general consensus in this regard, David Dinant (fl. 1210) "who very stupidly proposed that God is prime matter" (*ST* 1.3.8; see also *SCG* 1.17).

<sup>17</sup> Thus, Boethius explains the standard view by insisting that God is a form and no form can be a substratum (*De Trinitate* 2), whereas Aquinas explains it by appealing to God's complete actuality (*ST* 1.3).

<sup>18</sup> For further background on universal hylomorphism, especially in the 13th century, see Spade 2008 and the references cited in Wipfel 2000, 139, n. 19. For some classic discussion of this doctrine, see Kleineidam 1930 and Lottin 1932.

<sup>19</sup> Although like other medieval philosophers, universal hylomorphists regard God as a substance in a special sense, insofar as he falls outside the ten Aristotelian categories. See again the discussion in §2.4.

<sup>20</sup> See Spade 2008, §1.1.

of prime matter, and hence of matter in Aquinas's strict or proper sense. For the same reason, they think the existence of immaterial compounds to be impossible.

The precise motivation for universal hylomorphism is difficult to identify. Aquinas himself traces its origin to Avicenna (c.1020–1070), and suggests at various places that its motivation derives from a failure to distinguish between functional and prime matter.<sup>21</sup> But this can't be the whole story. Indeed, the lengths to which Aquinas himself goes to establish that incorporeal (or spiritual) substances such as angels cannot be composed of prime matter suggests that at least some of its proponents recognized this distinction, and yet nonetheless insisted that anything having matter in the functional sense of a substratum must also be composed of prime matter.

A better suggestion is that the doctrine is rooted in the traditional view that divine simplicity is part of what distinguishes God from *all* creatures.<sup>22</sup> Thus, whereas God himself is absolutely simple, all created substances are complex, not only with respect to their possession of accidental forms or properties, but also with respect to their nature or essence. This suggestion fits well with the fact that Aquinas works hard to establish a sense in which even wholly immaterial creatures are complex. Thus, insofar as they are all contingent, he argues, we can think of them as "composed" of essence and existence—though such composition cannot literally be understood in hylomorphic terms.<sup>23</sup>

But whatever the historical motivation for universal hylomorphism, the significance of the doctrine for present purposes is that it forces its proponents to draw a sharp distinction between material and corporeal compounds. For even if all creaturely substances are composed of prime matter, and hence genuinely material, proponents of universal hylomorphism still want to maintain that at least some hylomorphic compounds, such as angels and human souls, are incorporeal (or spiritual). Thus, universal hylomorphists habitually distinguish two different types of prime matter—that possessed by corporeal substances (such as rocks, plants, animals, and even human beings) and that possessed by incorporeal or spiritual substances (such as angels and human souls). For obvious reasons, the former was referred to as *corporeal matter*, the latter as *spiritual matter*.<sup>24</sup>

<sup>21</sup> See, e.g., *DEE* 4 and *In Sent.* 2.3.1.1. For some classic discussions, see Forest 1931, 116–20; Guttman 1891, 16–30; and Wittmann 1900, 33–55. See also Wippel 1981, 276–7 for further references and discussion.

<sup>22</sup> See Spade 2008, §1.1.

<sup>23</sup> This is the basis for Aquinas's famous doctrine of the distinction of essence and existence. The *locus classicus* for this doctrine is *DEE* 4. But see *SCG* 2.54, where Aquinas insists that the type of composition associated with being and essence differs from that associated with form and matter. See also *QDP* 3.8 and *In Meta.* 12.1.2419, which put us on guard against taking the doctrine literally to involve any sort of composition, by speaking of creatures merely "as if" they were composed of being (*quasi esse habens*). The literature on Aquinas's essence–existence doctrine is extensive. For helpful background, introduction, and further texts, see Wippel 2000. For a brief statement of my own preferred understanding of the doctrine, see again §1.2.

<sup>24</sup> As Spade (2008, n. 5) points out, the distinction between corporeal and spiritual matter can be found as early as Augustine's *Confessions* 12.17.25. During the Middle Ages, 'spiritual' (*spiritualis*) is often used as the contrary of 'corporeal' (*corporalis*).

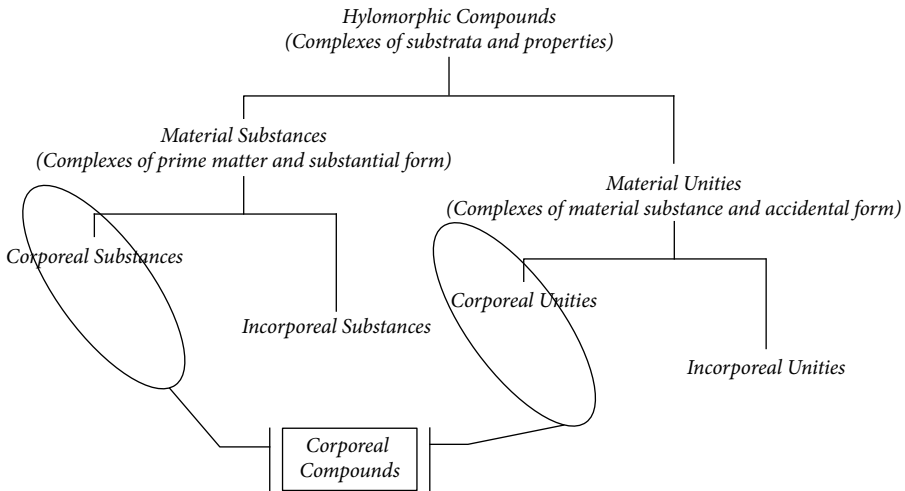


Figure 8.3 Universal Hylomorphism

Now, just as we can distinguish corporeal and spiritual substances, so too we can distinguish the larger accidental unities or compounds of which they are a part. For the sake of clarity, therefore, we can represent the division of hylomorphic compounds to which universal hylomorphism gives rise as indicated in the diagram at Fig. 8.3.

As this diagram is intended to make clear, the proponents of universal hylomorphism take all hylomorphic compounds to be composed of prime matter, and hence to be genuinely material, whereas they take corporeal compounds to be a proper subset of material compounds—namely, all and only those composed of corporeal prime matter.

Aquinas rejects the distinction between corporeal and material compounds, and with it the suggestion that there could be any type of spiritual prime matter. As he sees it, anything composed of prime matter is for that very reason corporeal. Thus, speaking of matter in the primary or proper sense, he says:

Matter can be found only in those things that have a potentiality with respect to place (*ad ubi*). But the only things of this sort are corporeal objects (*corporalia*), which are circumscribed by place (*loco circumscribuntur*). Hence, matter can be found only in corporeal objects. (QDA 6.149–152)

As this passage reveals, there is a close connection for Aquinas between prime matter and corporeality. Indeed, as he says in the final sentence: “matter can only be found in corporeal objects.” For the same reason, if something is incorporeal (or spiritual), he thinks that it must lack prime matter altogether.

The passage just quoted not only highlights the connection between prime matter and corporeality, for Aquinas, but also clarifies how he is thinking of corporeality



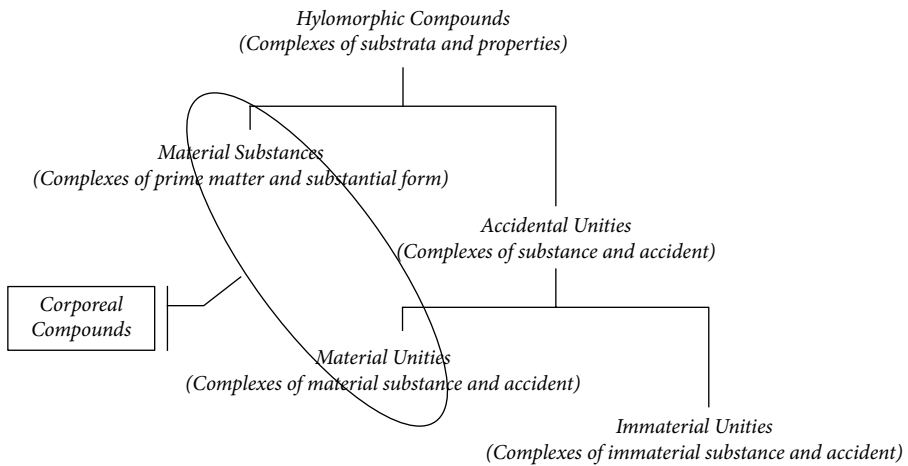


Figure 8.4 Restricted Hylomorphism

itself—namely, in terms of the capacity to be “circumscribed by place”. Like other medieval philosophers, Aquinas appeals to the notion “circumscription” to distinguish the type of spatial location possessed by corporeal objects from that possessed by immaterial substances, such as God and the angels. For like them, he assumes that even immaterial substances can be said to be located at the places to which their power or activity extends.<sup>25</sup> In other contexts, Aquinas clarifies the type of spatial location in question by saying that, unlike God and the angels, corporeal objects “fill their place” (*replent locum*) or “possess extension in three dimensions” (*habent trinam dimensionem*).<sup>26</sup> As all of this helps to make clear, Aquinas is thinking of corporeality in terms of the capacity for *spatial extension*. Against the universal hylomorphists, moreover, he insists that the mere possession of prime matter is sufficient to confer this capacity on its possessor, and hence to qualify it as corporeal.<sup>27</sup>

For the sake of contrast with universal hylomorphism, we can represent Aquinas’s preferred division of hylomorphic compounds in the way indicated in the diagram at Fig. 8.4.

I have described Aquinas’s hylomorphism in this diagram as “restricted”. This is because, unlike the proponents of universal hylomorphism, he denies that all hylomorphic compounds are composed of prime matter. Even so, we can see that there is

<sup>25</sup> See esp. *ST* 1.52.1–3.

<sup>26</sup> See, e.g., *ST* 1.3.1 obj. 1, 52.1–2, and *In BDT* 4.3.

<sup>27</sup> Aquinas often speaks as if the possession of prime matter were not only sufficient for something to possess the capacity for spatial extension, but also necessary for it. But see §11.3 for a complication that forces Aquinas to allow that even something without prime matter can “fill” a place, at least by divine aid. It is also important to emphasize that, although Aquinas takes the possession of prime matter to confer on its possessor the capacity for spatial extension, he also takes the precise extension of a compound to be determined by certain of its quantities (what he calls its determinate dimensions). I will have more to say about this in §11.3 as well. But see also Brower 2012b, Brown 2005, 57–9, and Stump 2003, 47–50.

a respect in which his hylomorphism is really the more universal doctrine. For unlike the universal hylomorphists, Aquinas does not restrict the class of corporeal compounds to a proper subset of those possessing prime matter (namely, all and only those that possess corporeal prime matter). On the contrary, he insists that all compounds possessing prime matter are corporeal.

Contrasting Aquinas's restricted hylomorphism with the sort of universal hylomorphism accepted by many of his contemporaries not only highlights the historical significance of Aquinas's own views, but also explains his preference in certain contexts for using the terms 'corporeal' and 'incorporeal' (or 'spiritual') over 'material' and 'immaterial'. Although Aquinas himself takes the possession of prime matter to be the mark of corporeality, he recognizes that not everyone shares this view. Hence, when he wants to avoid begging any questions, he speaks of 'corporeal' and 'incorporeal' (or 'spiritual') beings rather than 'material' and 'immaterial' ones.

For our purposes in this book, however, we needn't be so scrupulous. The proponents of universal hylomorphism will not figure prominently in the discussion to follow, and there are few, if any, today who would insist on distinguishing corporeality from materiality. For the same reason, I shall hereafter simply speak of material compounds, assuming that all and only material compounds are corporeal.

## Types of Material Compound

In Chapter 8 we identified the main concept in terms of which Aquinas's account of material objects is to be understood—namely, that of a material compound (or hylomorphic compound possessing prime matter). But before we can turn to the details of Aquinas's account of material objects (Ch. 10), we must first get clearer about his understanding of material compounds themselves—and in particular the various types that he distinguishes.

### 9.1 Celestial vs. Terrestrial Bodies

We have already discussed at some length Aquinas's two main subtypes or categories of material compound—material substances and material unities. We have also noted that material substances qualify as the primary or basic type of material compound. For although both types of compound possess prime matter, material substances possess it as an immediate proper part or constituent, whereas material unities possess it only by possessing a material substance as an immediate proper part.<sup>1</sup>

Because material substances are the primary type of material compound, Aquinas's discussion of the nature or essence of such compounds typically focuses on them. Indeed, although he thinks of all material compounds as essentially composed of matter and form, the fact that material substances are the most basic type sometimes leads him to say that only they have natures or essences in the strict or proper sense, whereas their accidental forms as well as the accidental unities of which they are a part have natures or essences only in a secondary or derivative sense.<sup>2</sup>

In Aquinas's time, there was significant debate about whether the nature or essence of material substances includes (a) both prime matter and substantial form, or (b) only substantial form. Avicenna (c.980–1037) defended the first position, whereas Averroes (c.1126–1198) and his followers defended the second.<sup>3</sup> Aquinas himself comes down squarely on the side of Avicenna in this debate. Consider, for

<sup>1</sup> Recall the definition of immediate proper parthood:  $x$  is an immediate proper part of  $y$  if and only if  $x$  is a proper part of  $y$ , and there is no  $z$  such that  $x$  is a proper part of  $z$  and  $z$  is a proper part of  $y$ .

<sup>2</sup> See esp. *DEE* 1 and 6. See also the discussion in §1.5.

<sup>3</sup> See, e.g., *In Meta.* 7.9.1467, where Aquinas refers to both positions. For relevant background and discussion, including the relation of both positions to Aristotle himself, see Mauer 1951 and Wippel 2000, 328–33.

example, the following passage from *De ente et essentia*, where Aquinas also refers to material substances as 'composite substances' and 'natural substances':

We know that form and matter exist in composite substances, as a soul and body exist in a human being. But we cannot say that one of these alone is the essence of the composite . . . For on the basis of what we said earlier, it is clear that the essence of a thing is what its definition signifies. But the definition of natural substances contains not only form, but matter as well . . . It is clear, therefore, that their essence includes both matter and form. (*DEE* 2.1–25)

As Aquinas insists here, and reiterates elsewhere, the nature or essence of material substances must be said to include both matter (in the sense of prime matter) and form (in the sense of substantial form).<sup>4</sup> It is important to recognize, moreover, that although Aquinas typically speaks of natures or essences as what members of the same kind share in common (indeed, he often speaks of them as *common natures* or *essences*), he sometimes also speaks of individual instances of such kinds as natures or essences (or, more precisely, as *individual natures* or *essences*). Thus, a human being, such as Socrates, can be said not only to *have* a common nature, which includes matter and form in general, but also to *be* an individual nature, which is an individual object composed of a distinct portion of matter and a distinct substantial form.<sup>5</sup>

Given that all material substances possess prime matter, and possess it in the same way (namely, as an immediate proper part), it might appear that the class of material substances can be further subdivided only in terms of the different types of substantial form they possess (since that is the only other type of immediate proper part they possess). In fact, however, this is not the case. For although Aquinas rejects any distinction between corporeal and spiritual prime matter—all prime matter or stuff is for him corporeal—he nonetheless distinguishes two different types of corporeal prime matter (at least in his mature writings, such as *Summa Theologiae*).<sup>6</sup> On the one hand, there is the type of prime matter possessed by sublunary or terrestrial bodies, including the four elements and so-called mixed bodies which are in some sense composed of the elements (more on this in §9.2). Call this *terrestrial prime matter*. On the other hand, there is the type of prime matter possessed by heavenly or celestial bodies, including the moon, stars, and other planets. Call this *celestial prime matter*.

Until the mid-1260s, when Aquinas began working on his *Summa Theologiae*, he did not think it was necessary to appeal to different types of prime matter to account for what he, like most other pre-modern philosophers, takes to be the central difference between terrestrial and celestial bodies—namely, that the former are all

<sup>4</sup> See also *In Sent.* 4.44.1.1 ad 2, *In Meta.* 7.9.1467, and the further references in Mauer 1951, which show that this is a doctrine that Aquinas held throughout his career.

<sup>5</sup> Thus, when Aquinas speaks of Christ as taking on human nature, he speaks of him as taking on human nature in general by assuming an individual human nature. See, e.g., *ST* 3.2.2 corpus and ad 3. See also the discussion of the Incarnation in Ch. 13 (esp. §13.3).

<sup>6</sup> See in particular *ST* 1.66.2.

corruptible, in the sense of being capable of undergoing substantial change, whereas the latter are all incorruptible in this same sense.<sup>7</sup> In earlier writings, such as his commentaries on Peter Lombard's *Sentences* and Boethius's *De Trinitate*, Aquinas attempts to explain the incorruptibility of celestial bodies by denying that they possess hylomorphic composition altogether. In this respect, he takes himself to be following the views of Averroes and perhaps also his teacher, Albert the Great (c.1200–1280).<sup>8</sup>

By the time of his writing the first part of his *Summa Theologiae*, however, Aquinas comes to regard this explanation as wholly unsatisfactory. Here he devotes an entire article of the *Prima Pars* to the question “Is there a single type of matter for all corporeal objects?”, ultimately responding in no uncertain terms:

It is impossible for there to be a single type of matter (*una materia*) for both a body that is corruptible by nature and a body that is incorruptible by nature. (*ST* 1.66.2)

We can summarize the considerations that led Aquinas to his mature position as follows. Insofar as terrestrial and celestial bodies are both material (and hence corporeal), they must be composed of prime matter. Indeed, since prime matter cannot exist on its own, all bodies must be composed of both prime matter and substantial form, and hence possess genuine hylomorphic composition. Now insofar as terrestrial bodies are corruptible, and hence capable of undergoing substantial change, their prime matter is such that it is always in potentiality with respect to taking on other substantial forms. By contrast, insofar as celestial bodies are incorruptible, their prime matter must be such that once it takes on a substantial form it is no longer capable either of acquiring any new substantial form or of losing the one it already has. Hence, there are two distinct types of prime matter.<sup>9</sup>

<sup>7</sup> Indeed, like so many other pre-modern philosophers, Aquinas thinks that celestial bodies are capable of only a single type of accidental change—namely, changes in location or place, and this only when such local motion is understood to be perfectly circular. See again *ST* 1.66.2. For a sympathetic treatment of the reasons, empirical and otherwise, that led to this conception of celestial bodies, see C. S. Lewis 1964.

<sup>8</sup> For relevant texts, historical background, and details of Aquinas's early views, see Baldner 2000 and 2004.

<sup>9</sup> The summary I've just presented represents what we might call *the standard interpretation* of Aquinas's mature view about celestial bodies. (This interpretation is defended at great length in Litt 1963. But see also Bobik 1998, 199–205; Wippel 1981, 286–7; and the other references cited in Baldner 2004, n. 3.) The standard interpretation has recently been challenged on two different fronts. First, Pasnau (2002, 137) challenges it by denying that there is any prime matter at all for Aquinas, much less two different types of such matter. I have already dealt with this challenge in my treatment of Aquinas's account of change and hylomorphism (Chs 3–5, esp. §5.5). Second, Baldner (2000 and 2004) challenges the standard interpretation by claiming to detect another position on the heavenly bodies in works written after the first part of the *Summa Theologiae*. More specifically, Baldner argues that in two later works—*De substantiis separatis* (1271) and his commentary on Aristotle's *De Caelo* (1272–3)—Aquinas explains the incorruptibility of celestial bodies by appealing to their possession of a distinctive type of substantial form (rather than a distinctive type of prime matter). According to Baldner, therefore, Aquinas's most mature view countenances not two types of prime matter, but only one. Although this would appear to challenge the standard interpretation by making it accurate for only a certain stage in Aquinas's development, Baldner also gives some reasons for thinking that the view Aquinas expresses in the *Summa Theologiae* is,

The main division within the class of material substances, therefore, is into those that are incorruptible (i.e., celestial bodies) and those that are corruptible (i.e., terrestrial bodies). And on Aquinas's mature view, this division is itself to be drawn in terms of the different types of prime matter each possesses. Since Aquinas thinks there are no further types of prime matter to be distinguished, all further subdivisions within these two classes of material substance will depend on differences in the types of substantial form they possess. Because celestial bodies will not figure prominently in the discussion to follow, I will hereafter briefly elaborate only on the further subtypes of terrestrial body that Aquinas distinguishes.

## 9.2 Living Bodies (or Organisms)

Among terrestrial bodies, Aquinas takes the most important division to be that into living bodies (or organisms) and non-living bodies. Aquinas refers to the substantial forms of living bodies as 'souls' (*animae*), because they bestow on bodies the causal powers required to be biologically alive or animate (*animatae*). What is more, he specially associates these causal powers with the capacity for self-motion and cognition.<sup>10</sup>

in fact, the same as that expressed in his later works, and hence that the standard interpretation is not accurate for any stage of his development.

Baldner's argument poses a serious challenge to the standard interpretation, and I can't do justice to all of its nuances here. Even so, I want to indicate at least briefly why I remain unpersuaded by it. First, as Baldner himself admits, it is natural to read Aquinas's later texts as presupposing the existence of two types of prime matter, and simply emphasizing the distinctive nature of the substantial forms associated with compounds possessing celestial prime matter. Second, and more importantly, what appears to motivate Baldner's particular (and in my opinion, less natural) reading of these texts are certain systematic considerations. As Baldner notes, Aquinas's only positive characterization of prime matter is as pure potentiality. But this characterization itself seems to require that prime matter as such is capable of acquiring or losing substantial forms (unless its possession of a special type of form alters its capacity in this regard). Again, Baldner thinks that speaking of "two types of prime matter" is absurd, insofar as it "would import a notion of form in the very meaning of matter" (2004, 457). For this way of speaking seems to require that prime matter is a genus having two species, where species are always divided by certain forms (namely, differentia). But I don't myself find such considerations compelling. Although 'pure potentiality' does have the implications Baldner suggests in the context of Aquinas's Natural Philosophy or Physics, where it is associated with change (and hence potentiality for taking on distinct forms), it doesn't have these same implications in the context of his Metaphysics, where it seems to be associated primarily with a lack of individuality. Nor does speaking of two types of prime matter or non-individual stuff require that we think of the different types as sharing some common form—in the way species of a common genus do. Indeed, just as Aquinas insists (e.g. at *ST* 1.3.8 ad 3) that God and prime matter can be different—or better, diverse—types of being in and of themselves, without appealing to any distinct forms or differentia, the same is true, I suggest, of different types of prime matter. In the end, therefore, there seems to me no good reason to resist the position suggested by the straightforward reading of *ST* 1.66.2, and no good reason to suppose he's departed from this in his later works.

<sup>10</sup> See, e.g., *ST* 1.75.1. In some places, however, Aquinas suggests that even cognition can be explained as a type of self-motion, and hence that the latter is really the distinguishing feature of living things. See *ST* 1.18.1, as well as the further texts and discussion in Pasnau 2002, 212–13. Finally, it is worth noting that Aquinas is prepared to apply 'living' in an extended or analogical sense even to immaterial substances, insofar as they are capable of self-motion or cognition, and to God most of all, since he is the first mover. See *ST* 1.18.3.

By contrast, Aquinas refers to the substantial forms of non-living things as mere ‘forms of corporeity’ (*formae corporeitatis*), since they bestow on their possessors the causal powers associated with mere bodies—that is, non-living or inanimate bodies.<sup>11</sup> Aquinas specially associates these causal powers with characteristics of the elements. Indeed, he sometimes further subdivides the class of inanimate bodies into the elements (earth, air, fire, and water) and minerals (or mixed bodies), depending on the precise relationship of their substantial form to such characteristics. Those inanimate bodies whose substantial forms bestow powers associated with the characteristics of the elements in their pure form (hot, dry, wet, and cold) are themselves elements, whereas those whose substantial forms bestow powers associated with some combination (or complicated function) of such characteristics are mixed bodies.<sup>12</sup>

Among living bodies, Aquinas distinguishes three main types—plants, brute animals, and human beings—where here again the distinction depends on the specific causal powers or capacities conferred by their substantial forms (or better, souls). Thus, plants are living bodies whose souls bestow on them the capacity for nutrition and growth. Brute animals are living bodies whose souls bestow on them not only the capacity for nutrition and growth, but also certain further capacities—in particular, the capacity for local motion and (various types of) sensory cognition. Finally, human beings are living bodies whose souls bestow on them yet further capacities—in particular, the capacity for rational (or intellectual) cognition and volition. For obvious reasons, Aquinas often refers to the different types of substantial form (or soul) that can be possessed by living bodies as the *vegetative soul*, *sensory soul*, and *rational soul*. In the case of the rational soul, moreover, Aquinas sometimes also refers to it as the *intellectual soul* or *intellect* or even *mind*.<sup>13</sup>

<sup>11</sup> In Chapter 8 (§8.3) we saw that there is a sense in which the possession of prime matter is what makes a substance corporeal. For a corporeal substance is one that can be extended in three dimensions, and it is the possession of prime matter that bestows this capacity on a substance. As we can now see, however, there is also a sense in which the possession of a substantial form (*forma corporeitatis*) makes a substance corporeal. For a corporeal substance is also one that possesses a distinct set of causal powers or capacities, and it is the possession of the relevant type of substantial form that bestows these. Indeed, as we can now see, the “corporeal” capacities bestowed by prime matter and substantial forms, respectively, are of two very different types. The capacities bestowed by substantial forms are best understood as *active* capacities—that is, as capacities (or causal powers) of spatially extended objects to *do* certain things. By contrast, the capacity bestowed by prime matter is best understood as a purely *passive* capacity—that is, the capacity to receive the quantitative accidents or dimensions in virtue of which things are spatially extended. Interestingly, given the close connections between corporeality, spatial extension, and quantitative accidents, Aquinas is even willing to allow that there is a sense in which the possession of quantitative accidents makes a substance corporeal—indeed, that the term ‘body’ (*corpus*) can even be used to refer to such accidents. See, e.g., *DEE* 2, *In Sent.* 1.25.1.1 ad 2, and *SCG* 4.81.7.

<sup>12</sup> See Bobik 1998 for details as well as some complications for Aquinas’s understanding of “mixed” bodies in general. See also Brown 2005, 59–62.

<sup>13</sup> See, e.g., *ST* 1.76.1–2, where Aquinas refers to all the different types of soul and to the rational soul as ‘intellect’ (*intellectus*) and ‘mind’ (*mens*). See also *SCG* 3.22 (cited in the main text), as well as the references cited in the previous note.

As this description of the different types of terrestrial bodies suggests, Aquinas thinks that although these bodies possess different types of substantial form, nonetheless their forms are intimately related because of the relationship between the capacities bestowed by them:

The species of natural things seem to be ordered in a step-wise fashion, so that mixed bodies are more perfect than the elements, plants are more perfect than minerals, animals are more perfect than plants, and human beings are more perfect than the other animals; and within each of these divisions, one species is found to be more perfect than another. (*ST* 1.47.2)

Evidently, to say that one type of terrestrial body is more perfect than another is just to say that the capacities bestowed by the substantial form of the first type include those bestowed by the substantial form of the second.<sup>14</sup>

As Aquinas sees it, terrestrial prime matter is, in principle, capable of taking on any terrestrial substantial form whatsoever. Even so, because of the step-wise ordering or “perfection” of such forms, he also thinks that terrestrial matter is by nature ordered to these forms in a particular way:

Thus, prime matter is in potentiality, first of all, to the form of an element. When it is existing under the form of an element it is in potentiality to the form of a mixed body. (This is the sense in which elements are the matter for a mixed body.) But when it is considered under the form of a mixed body, it is in potentiality to a vegetative soul, for this sort of soul is the actuality of a body. Again, a vegetative soul is in potentiality to a sensory soul, and a sensory soul is in potentiality to an intellectual soul. (The process of generation shows this: at the start of generation there is the embryo living with plant life, later with animal life, and finally with human life.) But after this last type of form, there cannot be found any further and more noble type of form among generable and corruptible things. (*SCG* 3.22.7.2030b)

So much for Aquinas's division of material substances in general, and living bodies (or organisms) in particular. Let us now look briefly at his division of the other main type of material compound—namely, material unities.

### 9.3 Material Unities

Unlike material substances, Aquinas does not explicitly discuss the proper division of material unities. Nonetheless, if we reflect on the principles governing his division of material substances, we can see that similar sorts of divisions can be drawn in their case as well.

Like material substances, material unities are compounds of matter and form—though instead of being composed of prime matter and substantial form, they are composed of material substance and accidental form. As we have just seen, in the case of material substances Aquinas thinks we can distinguish as many types of

<sup>14</sup> See again *ST* 1.76.1. See also *QDSC* 1.2 and *In Meta.* 7.17.1673–1674, and the discussion in Brown 2005, 75–6.



compound as there are types of the matter and form of which they are composed. Thus, he distinguishes two genera of material substance based on the different types of prime matter they possess—*celestial bodies* and *terrestrial bodies*—and he distinguishes five species of terrestrial body based on the different types of substantial form they possess—*elements, minerals, plants, animals, and human beings*.

Presumably, the same sorts of principles can be used to divide the class of material unities as well. Thus, insofar as material unities are compounds of material substance and accidental form, there will be as many types of material unity as there are types of material substance and accidental form. Or, more precisely, there will be as many genera of material unity as there are types of material substance, and there will be as many species of material unity as there are types of accidental form possessed by such substances. Since we have already investigated Aquinas's division of material substances, it remains only to consider briefly his division of accidental forms.

Aquinas's division of accidental forms must be understood as part of his broader theory of the Aristotelian categories. It is tempting to think that insofar as these categories provide us with a division of fundamentally different types of being, their members must be thought of as falling under distinct (or non-overlapping) classes of beings—and in the case of accidents in particular, nine such classes.<sup>15</sup> In fact, however, Aquinas denies this. There are two main places in Aquinas's work where he treats the division of the accidental categories—namely, his commentaries on Aristotle's *Physics* and *Metaphysics*.<sup>16</sup> And in both places, Aquinas insists that their division, like that of the categories in general, must be understood not in terms of distinct classes of beings but rather in terms of distinct modes of being (*modi essendi*). Indeed, he tells us that it is because the distinct modes of being associated with the categories correspond to distinct modes of predication that the categories themselves can be called *predicaments* (*praedicamenta*—literally 'things that are predicated'):

Being is divided into the ten predicaments not univocally, as a genus into its species, but according to distinct modes of being. Now these modes of being correspond to [distinct] modes of predicating. For when one thing is predicated of another, we say the one *is* the other. And this is why the ten categories (*decem genera*) are called *predicaments*. (*In Phys.* 3.5.15)

What is more, in both his *Physics* and his *Metaphysics* commentaries, Aquinas insists that one and the same form or property can be associated with distinct accidental modes of being, and hence fall under more than one of the accidental categories. Since it will be instructive to see how this works in a particular case, let us briefly consider what Aquinas says about the accidental categories of action and passion.

<sup>15</sup> For the record, the nine accidental categories are quantity, quality, relation, action, passion, time (or when), place (or where), position, and habit.

<sup>16</sup> For helpful background and discussion of Aquinas's treatment of the division of the categories in these two works, see Wippel 1987.

Like Aristotle, Aquinas takes *action* and *passion* to be the two categories in terms of which all cases of ordinary efficient causation are to be understood. Thus, when a fire heats some water, Aquinas takes it to do so by acting (or by manifesting an active power or capacity to heat); likewise, when some water is heated by a fire, he takes this to occur by its being acted on (or by manifesting a passive power or capacity to be heated). As these examples suggest, Aquinas's conception of agency or action is much broader than the standard contemporary conception, according to which only conscious beings or persons act. For Aquinas, by contrast, anything functioning as an efficient cause qualifies as an agent, just as anything that is acted on by such a cause qualifies as a patient.<sup>17</sup>

Aquinas thinks that actions and passions (or the manifestations of active and passive powers) are always to be explained in terms of a single form—namely, motion. What's more, he takes this form to be a property that inheres solely in the patient.<sup>18</sup> Thus, when a fire heats some water, he takes there to be a single form or property of the water that serves both as the fire's heating (or action) and as the water's being heated (or passion). As he puts the point in his commentary on Aristotle's *Physics*:

Characterized in one way (*secundum unam rationem*), this motion is an action, but characterized in another way (*secundum aliam rationem*), it is a passion. (*In Phys.* 3.5.13)

Aquinas realizes that the identification of a single form with two distinct types of accident—action and passion—might seem inconsistent with the claim that *action* and *passion* are distinct categories of being. But his solution, once again, is to insist on the connection between the categories and modes of predication:

It must be kept in mind that the categories (*praedicamenta*) are distinguished on the basis of distinct modes of predicating. One and the same thing, therefore, can belong to distinct categories insofar as it is predicated of different things in different ways. (*In Meta.* 11.9.2313)

And he goes on to apply this point directly to action, passion, and motion:

In the same way, insofar as motion is predicated of the subject in which it inheres [namely, the patient], it gives rise to the category of passion. But insofar as it is predicated of that from which it proceeds [namely, the agent], it gives rise to the category of action. (*In Meta.* 11.9.2313)

Aquinas's point here seems to be the following. Insofar as a motion is predicated of the subject in which it inheres (namely, a patient), it possesses a mode of being that enables us to classify it as one type of accidental form or being—namely, *passion*. And insofar as this same motion is predicated of the subject from which it proceeds

<sup>17</sup> See Rota 2012 for a helpful introduction to Aquinas's theory of efficient causation.

<sup>18</sup> In this respect, Aquinas's views are perfectly standard. For helpful background to medieval theories of causation in general, as well as references to Aquinas's views in particular, see Freddoso 2002. For an analysis of Aquinas's views about motion in particular, see MacDonald 1991.

(namely, an agent), it possesses another mode of being, one that enables us to classify it as another type of accidental form or being—namely, *action*.<sup>19</sup> But, then, provided we understand the categories of action and passion not in terms of mutually exclusive classes of forms or properties, but rather in terms of distinct modes that can be possessed by the members of a single class of forms (namely, motions), there is no inconsistency in regarding action and passion as distinct ontological categories populated by the members of one and the same class of forms.<sup>20</sup>

The point that Aquinas is making here isn't restricted to the categories of action and passion, but applies to other accidental categories as well.<sup>21</sup> This raises an important question. How many distinct (or non-overlapping) classes of accidental forms or properties does Aquinas ultimately recognize? There can, I think, be little doubt that he posits at least three such classes—namely, those falling under the categories of quantity, quality, and action/passion.<sup>22</sup> Unlike the forms or properties associated with action and passion, which Aquinas calls 'motions', he doesn't provide us with any neutral terms for referring to the forms or properties associated with quantity

<sup>19</sup> As this example helps us to see, Aquinas's understanding of the accidental categories permits a distinction between what we might call *intrinsic* and *extrinsic* accidental categories. Intrinsic accidental categories are those (such as *passion*) whose members are predicated of their subject of inherence. By contrast, extrinsic accidental categories are those (such as *action*) whose members are predicated of something other than their subject of inherence. (Predications of this latter sort are often referred to as *extrinsic denominations*.)

There is a tradition in medieval philosophy, going back to Boethius's *De Trinitate* and the anonymous *Liber sex principiorum*, of attempting to divide the Aristotelian categories along the lines just suggested. But in part because the authors of these two texts arrive at different divisions (with Boethius including relations among the extrinsic categories and the author of *Liber sex principiorum* including them among the intrinsic categories), there was considerable controversy about how the division itself should be understood, with Aquinas understanding it in slightly different ways in his *Physics* and *Metaphysics* commentaries. See McMahon 1980 and Wippel 1987 for some helpful background and discussion of Aquinas's views in particular. See also Hansen 2012 for evidence that the division in the *Liber sex principiorum* encouraged at least some medieval philosophers to introduce polyadic properties into their ontology.

<sup>20</sup> See again the discussion in §2.4 for detailed development of my preferred model for understanding Aquinas's views on this score. It is important to emphasize that in speaking of "modes" here, I do not mean to be attributing to Aquinas a theory of modes of the sort to be found in Suarez or 17th-century philosophy. For theories of the latter sort, see Pasnau 2011, ch. 13.

<sup>21</sup> Indeed, in a portion of Aquinas's *Metaphysics* commentary that I omitted from the text just quoted, he suggests that just as action and passion are associated with distinct modes of a single form or property, the same is true of quantity and place:

For example, location (*locus*) belongs to the category (*genus*) of quantity insofar as it is predicated of something that locates. But insofar as it is predicated denominatively of something located, it gives rise to the category of place (*ubi*). (*In Meta.* 11.9.2313)

Here again, we appear to have a case of a single form or property that belongs to one accidental category (namely, *quantity*) insofar as it has one mode of being, and another accidental category (namely, *place*) insofar as it has another mode of being—where the modes of beings themselves are introduced via predications relative to different subjects.

<sup>22</sup> That Aquinas regards quantities as distinct from qualities seems clear from what he says about the order in which they inhere in substances and the different roles that they play in the Eucharist. See §11.3 for further discussion. That Aquinas regards motions as distinct from both quantities and qualities seems clear from the fact that he regards motions as a special type of form—what he sometimes calls *incomplete actualities*. See MacDonald 1991 for further discussion.

and quality. For convenience, I shall refer to them in what follows as 'quantities' and 'qualities', but it must be kept in mind that these same forms may well fall under other categories, and hence also be classifiable as other types of accidental form.<sup>23</sup>

While it is clear that quantities, qualities, and motions constitute three non-overlapping classes of forms or properties, it is difficult to determine whether any of the other accidental categories likewise mark out distinct classes of forms. Part of the difficulty here has to do with Aquinas's relative neglect of the other categories. Indeed, his views about the last six categories—the so-called *sex principia*—are notoriously obscure, and as a result there is considerable controversy surrounding their proper interpretation.<sup>24</sup> But part of the difficulty also has to do with the specific way in which commentators habitually approach Aquinas's views about the accidental categories in general, and the last six in particular. Instead of asking about how many distinct classes of accidental form are required to explain the various modes of being associated with these categories, commentators tend to ask whether Aquinas thinks of each category as introducing a new, distinct reality *in the subject* of which its members are predicated.<sup>25</sup> More often than not, this approach seems to me to obscure rather than illuminate Aquinas's views. For talk of a "distinct reality" can range over both distinct forms and distinct modes of being, and in the case of motion in particular it is not at all clear that Aquinas thinks there is a distinct form or mode literally *in* one of the subjects of which it is predicated (namely, the agent).<sup>26</sup>

It would take us too far afield to try to resolve all the relevant interpretive difficulties and debates here. In the interest of brevity, therefore, let me simply register my conviction that quantities, qualities, and motions are the only distinct (or non-overlapping) classes of accidental form or property that Aquinas admits into his ontology. Of course, if I'm right about this, then the other accidental categories do not mark out distinct classes of forms, but rather are populated by members of one of the three classes just mentioned.

The relevance of all this for Aquinas's division of material unities is, perhaps, obvious. Insofar as the accidental categories are all populated by the members of three distinct classes of accidental form, it follows that material unities are all composed of material substances and forms drawn from one of these classes. For the same reason, if my interpretation of the accidental categories is correct, there is a clear sense in which there are three and only three types of material unity for Aquinas. For convenience, I will refer to these three types as *quantified*, *qualified*,

<sup>23</sup> As the previous note suggests, this is certainly the case with quantities.

<sup>24</sup> See, e.g., Hoenen 1956 and Krempel 1952, who attempt to reduce the last six categories to the first four, and Wippel 1987, who insists on a non-reductive understanding of all ten categories.

<sup>25</sup> This is certainly the approach of Hoenen 1956 and Krempel 1952, but even Wippel 1987 (esp. nn. 63–4) seems to me to adopt this approach in the course of responding to them.

<sup>26</sup> Indeed, I suspect this approach is part of what leads Wippel to suggest, mistakenly in my opinion, that in addition to motions, which inhere in patients and qualify as actions only insofar as they are predicated of agents, there are also actions that literally *inhere in* agents. See Wippel 1987, 33–4 and the further discussion in 2000, 226–8.

and *moving material unities*. But again, we must not be misled by this terminology into thinking that certain of the accidental categories are more fundamental than others.

## 9.4 Artifacts

There is one final issue bearing on Aquinas's understanding of material compounds that must be touched on here—namely, his views about artifacts. This is an issue that has received considerable attention from contemporary commentators. Nonetheless, it seems to me that Aquinas's views on this score have yet to be fully appreciated, in large part because the force of the evidence against a certain standard interpretation has been overlooked.

In the secondary literature, 'artifact' is the English term habitually used to translate Aquinas's Latin terms *artificiatum* and *artificialis* (and their cognates). As the etymology of these terms would suggest, Aquinas uses them (both substantively, and in connection with nouns such as *res* or *corpus*) to mean 'a thing produced by art' or, more simply, 'an artificial thing'. As we might expect, therefore, artifacts (*res artificiatas* or *artificiales*) are to be contrasted, for Aquinas, with natural things or things produced by nature (*res naturales*).

Among Aquinas's commentators, the main interpretive dispute has focused on whether he allows substances to be artifacts. On the face of it, it seems that he does not. Indeed, certain things Aquinas says at various places in his writings would seem to imply, if not outright assert, that no substance could be an artifact. To cite just a few representative passages:

Not all things are substances, as is especially clear in the case of artifacts (*artificialibus*). On the contrary, only those things that are natural with respect to their being, and constituted by nature with respect to their becoming, qualify as true substances. (*In Meta.* 7.17.1680)

All artificial forms are accidental. For art operates only on something already constituted in complete being by nature. (*DPN* 1.79–81)

Among bodies, some are physical (i.e., natural) bodies, whereas others are not natural but artificial. Thus, a human being, a piece of wood, and a stone are natural bodies, whereas a house and an ax are artifacts. Now natural bodies seem to qualify as substances more than artifacts do, since natural bodies are principles of artifacts. For art operates on the material that nature provides, and the form introduced by art is an accidental form, such as a shape or something of this sort. For the same reason, artificial bodies are not in the category of substance in virtue of their form, but only in virtue of their matter, which is natural. (*In DA* 2.1.142–154)

As this last passage suggests, Aquinas is willing to grant that there is a qualified sense in which artifacts can be substances—namely, "in virtue of their matter". But the point of the qualification just appears to be this. Artifacts are accidental unities in which substances play the role of matter. But, of course, if that's right, then the

qualification merely underscores the fact that substances are never, strictly speaking, artifacts.

On the basis of passages such as these, it is tempting to conclude that all artifacts are material unities for Aquinas, since presumably the matter for all artifacts will itself be a material substance or body. Eleonore Stump suggests this interpretation when she characterizes Aquinas's views as follows:

An artifact is thus a composite of things configured together into a whole but not by a substantial form. Since only something configured by a substantial form is a substance, no artifact is a substance. (Stump 2003, 39)<sup>27</sup>

Something like this interpretation of artifacts appears to represent the majority opinion among Aquinas scholars.<sup>28</sup> Hereafter, therefore, let us refer to it as *the standard interpretation*.

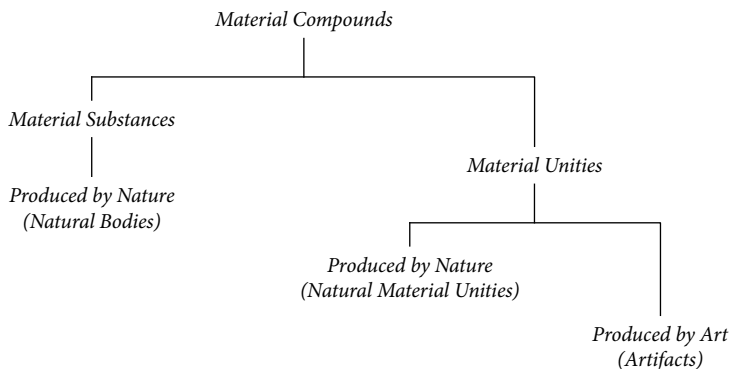
On the standard interpretation, all artifacts qualify as material unities. But of course the reverse need not be true. That is to say, it's open to proponents of the standard interpretation to say that only certain material unities qualify as artifacts, whereas others qualify as natural things. And, indeed, this is precisely what we might expect proponents of the standard interpretation to say. For although some of Aquinas's material unities (such as statues, axes, and houses) are clearly things produced by art, others (such as white-Socrates, brown-Bucephalus, and the like) are not. On the most plausible version of the standard interpretation, therefore, it would appear that we should represent the relationship of artifacts to material unities, as well as to material compounds more generally, in the way indicated by the diagram at Fig. 9.1.

Although the standard interpretation is often thought to provide us with an accurate interpretation of Aquinas's views, commentators sometimes raise doubts about its philosophical adequacy. After all, there seems to be no reason in principle why material substances couldn't be produced by art rather than nature. Indeed, there might appear to be actual examples of this sort of thing. Thus, Stump (2003, 44) offers *styrofoam* as a candidate for a type of non-living substance that "appears to be an artifact insofar as it is the product of human design", and others have suggested actual (as well as merely possible) examples involving living substances resulting from genetic modification or engineering.<sup>29</sup> In the face of these sorts of examples,

<sup>27</sup> As Rota (2004, 257, n. 2) points out, however, this characterization follows on from a discussion of "ordinary" artifacts, and hence that Stump may not intend this to apply to Aquinas's views about all artifacts.

<sup>28</sup> In addition to Stump 2003, see also Pasnau 2002 and Brown 2007a. I say that "something like" this interpretation represents the majority opinion because not everyone seems happy to speak of accidental unities as genuine objects over and above their parts. This may be what is behind Pasnau's preference for expressing Aquinas's position as "the view that all artifacts are nonsubstances with respect to their form" (415, n. 3). Similar descriptions of Aquinas's views about accidental unities can be found even among those who reject the traditional interpretation. See, e.g., Rota 2004, esp. 243–5.

<sup>29</sup> See Pasnau 2002, 415, n. 3 and Rota 2004, 251.



**Figure 9.1** Artifacts—The Standard Interpretation

Aquinas's apparent restriction of artifacts to material unities (rather than material substances) seems arbitrary.

Not everyone, however, is convinced that Aquinas's actual views are subject to these sorts of counterexample. In an important article, which in my opinion has yet to receive the attention it deserves, Michael Rota (2004) has provided some convincing evidence against the standard interpretation, arguing that, despite initial appearances to the contrary, some substances must be regarded as artifacts for Aquinas. Drawing on some hitherto overlooked (or at the very least, underappreciated) texts, Rota demonstrates that Aquinas himself accepts the existence of both non-living and living substances produced by art. Thus, in the context of the Eucharist, Aquinas claims that bread is both a substance and an artifact. And in this same context, he also suggests that certain frogs and serpents are both substances and artifacts (namely, those said to have been produced by certain Egyptian magicians in Exodus 7).<sup>30</sup>

Aquinas recognizes the apparent tension of his claims in this context with what he says elsewhere. Indeed, he imagines someone trying to use what he says elsewhere—in particular, his claim that a form introduced by art is always an accidental form—as the basis for an objection to thinking of bread as a substance. As Rota points out, however, Aquinas's strategy for responding to this objection is not to deny that bread (or even, more specifically, Eucharistic bread) is a substance, or that a form introduced by art is always accidental, but rather to draw a distinction that enables him to preserve both claims:

Although art is not able to introduce a substantial form by itself, it can nevertheless introduce such a form by the power of nature, which it uses as an instrument in its own operation. This is clear, for example, from the fact that art converts water into vapor, and air into fire, by means of fire. And likewise when an animal is killed, and its soul departs and another [substantial form] takes its place (for the generation of one thing is the corruption of another). So, too, it is

<sup>30</sup> See *In Sent.* 4.11.1.1.3 and *ST* 3.75.6, and the discussion in Rota 2004.

possible for a substantial form—that is, the substantial form by which bread is bread—to follow from the mixture of flour and water and the burning of fire. (*In Sent.* 4.11.1.1.3 ad 3)

As this passage makes clear, Aquinas thinks there is a distinction to be drawn between two different ways in which a form can be introduced by art: (i) by its own proper power, and (ii) by the power of natural principles. In the first way, no substantial form (and hence no substance) can be produced by art. Evidently, this is the way in which Aquinas intends his earlier claims about the non-substantial nature of artifacts to be understood. In the second way, however, a substantial form (and hence a substance) can be produced by art. And this, in turn, is the way in which he intends his claims about the substantial nature of certain artifacts to be understood. Indeed, as he makes clear in a parallel passage of his *Summa Theologiae*, this point can be applied not only to bread but also to frogs and serpents produced by magical arts:

Nothing prevents something from being made by art whose form is not accidental but substantial—just as frogs and serpents can be made by art. For art does not produce such a form by its own power, but by the power of natural principles. And this is the way in which the substantial form of bread [is produced]—namely, by the power of fire baking the material composed of flour and water. (*ST* 3.76.6 ad 1)

Drawing on passages such as these, Rota succeeds, I think, in providing us with decisive grounds for rejecting the standard interpretation in favor of a more nuanced interpretation. Indeed, what I think his discussion shows is that Aquinas is committed to each of the premises of the following argument:

#### **An Argument for Substantial Artifacts**

- (1) Some material substances are produced by art, working through the power of natural principles.
- (2) Anything produced by art is an artifact.
- ∴ (3) Some material substances are artifacts.

But if that is right, then Aquinas's views about artifacts ought to be represented not as our diagram at Fig. 9.1 suggests, but rather as indicated by the diagram at Fig. 9.2.

Rota's alternative interpretation enables him to defend Aquinas against the charge that his views about artifacts are overly restrictive, insofar as they exclude the possibility of substantial artifacts. Even so, this interpretation might seem to re-raise questions about the philosophical adequacy of Aquinas's views. For whereas the standard interpretation threatens to make such views seem overly narrow or restrictive, Rota's interpretation might seem to make them overly broad or promiscuous. Indeed, on Rota's interpretation, *anything at all* produced by art will qualify as an artifact, whether it be a material substance or a material unity—including not only



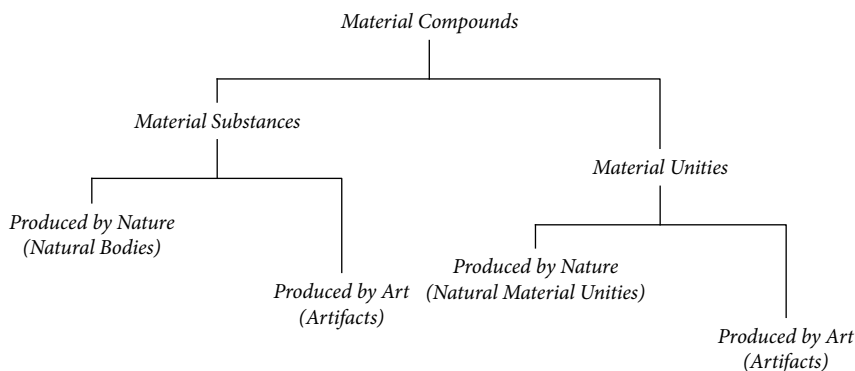


Figure 9.2 Artifacts—An Alternative Interpretation

the vapor produced by applying heat to some water, but also the corpse of an animal killed for food, and presumably even material unities such as white-Socrates or brown-Bucephalus, if they're produced in the right way (say, by intentionally keeping Socrates indoors or choosing Bucephalus's parents with a view to his color). But on the face of it, these consequences seem absurd. Do we really want to say that when an autopsy is performed to determine whether a person died of natural causes, what's really at issue is whether the corpse is an artifact?

The apparent absurdity of these consequences may explain why the force of Rota's objections to the standard interpretation has yet to be fully appreciated. Indeed, they might explain why some commentators have instead wondered whether Aquinas really accepts the second premise of the argument for substantial artifacts. Thus, Christopher Brown, in effect, suggests that the traditional interpretation can be upheld, and the apparent absurdities avoided, if we attribute to Aquinas a distinction between things produced by art (or artificial things) and artifacts, where the latter are a proper subset of the former.<sup>31</sup> For in that case we can say that although corpses are artificially produced, they are not artifacts. And likewise for vapor, frogs, serpents, and perhaps even bread.<sup>32</sup>

Initially this sort of strategy for defending Aquinas's views might seem attractive. For, at least in English, there would appear to be a basis for thinking of artifacts as a special class of artificially produced things. Indeed, in English the term 'artifact' connotes something that was not only produced artificially, but exhibits characteristic or telltale signs of artificial production. That is to say, it suggests something that can be (or ordinarily is) produced *only* by human art or design.

<sup>31</sup> See Brown 2007a. I say that Brown "in effect" suggests this response because he doesn't actually engage Rota's article, and hence doesn't appear to realize that there are any serious competitors to the standard interpretation.

<sup>32</sup> The case of bread raises some special problems. But see Brown 2007a for some clever suggestions about how to deal with it.

Despite the initial promise of this strategy, however, I think it is clearly a non-starter as an interpretation of Aquinas. There is simply no basis in his Latin for a distinction between artifacts and artificial things. On the contrary, as I noted at the outset of this section, and as should be clear from the passages we've already examined, the terms *artificiatum* and *artificialis* are synonymous, both etymologically and in Aquinas's own usage. Indeed, as Rota himself points out, both of these terms are used at various places by Aquinas as synonyms for 'things that are produced by art' (*quae sunt ab arte*) and 'things that come to be by art' (*illa fiunt ab arte*).<sup>33</sup>

What all of this shows, I think, is not that there is anything wrong with Rota's interpretation or even with the view of artifacts that emerges from it. Rather, it shows that commentators have simply missed the fact that there is no term, in Aquinas's Latin, exactly corresponding to the English term 'artifact'. What Aquinas is concerned with throughout his works is not the distinction between artifacts and non-artifacts (in our sense of the terms), but rather with the distinction between things artificially produced and things naturally produced. We can, if we like, use 'artifact' to render the Latin terms that Aquinas uses to refer to things artificially produced.<sup>34</sup> But we must not be misled into thinking (as contemporary commentators have been) that this implies that Aquinas has a theory of artifacts in our sense. As far as I can tell, he does not. And once we realize this, I think there can be no real objection, textually or otherwise, to the claim that he is committed to what I previously labeled 'the alternative interpretation'.

One final complication. It is sometimes suggested that there are grounds, in Aquinas's texts, for distinguishing two different types of non-substantial artifacts (or better, artificial things), depending on the number of substances that they involve. Thus, insofar as Aquinas takes statues to be artifacts whose matter involves a single substance, they are sometimes referred to as *simple* (or *one-piece*) artifacts. By contrast, insofar as Aquinas takes axes and houses to be artifacts whose matter involves multiple substances, they are sometimes referred to as *complex* (or *multi-piece*) artifacts.<sup>35</sup>

Although such a distinction may be useful for certain purposes, I do not think it can literally be understood as providing a division within the class of material unities (as if we could merely add some further subdivisions to the diagram at Fig. 9.2). For if what I have said about accidental forms in §9.3 is correct, the only types of material unity that Aquinas admits are those involving quantities, qualities, and motions. But since quantities, qualities, and motions are all monadic (or one-place) forms or properties—that is to say, forms or properties that inhere in a single substance—it

<sup>33</sup> See Rota 2004, 254.

<sup>34</sup> Indeed, it is hard to avoid this in the case of *artificiatum*, since 'artifact' is almost a transliteration of the term.

<sup>35</sup> See Rota 2004, 247 and Brown 2007a, 94, n. 14.

follows that the only types of material unity that he admits into his fundamental ontology are simple (or one-piece) unities. Strictly speaking, therefore, axes and houses—and even more complex artifacts, such as the Ship of Theseus—should not be conceived of as distinct types of material unity for Aquinas.<sup>36</sup> On the contrary, they should be conceived of as pluralities of simple material unities that have been ordered or bonded in some way.<sup>37</sup>

<sup>36</sup> As indicated in Ch. 7 (§7.3, n. 31), this complicates Aquinas's views about material constitution.

<sup>37</sup> See Brown 2005, ch. 4 for relevant texts and discussion.

# 10

## Material Compounds vs. Material Objects

We are now, finally, in a position to consider Aquinas's account of material objects. In this chapter, I reconstruct the account that emerges from the details of his hylomorphism, drawing in particular on the type of hylomorphic compound that has been our focus in Chapters 8 and 9—namely, material compounds.

In order to prepare the way for a proper understanding of Aquinas's account of material objects, I begin with some remarks about his ontology as a whole and where objects in general might be said to fit within it.

### 10.1 Objects in General

On the interpretation that I have been advancing, Aquinas's ontology can be said to include each of the following four general types of being:

#### Fourfold Division of Being

- (1) Prime matter
- (2) Form
- (3) Substance
- (4) Accidental unity

As we have seen (§§5.3–5), prime matter is non-individual stuff, forms are properties (or inherent beings), and substances and accidental unities are different types of subsistent (or non-inherent) beings. If material substances were the only type of substance that Aquinas recognized, we could subsume the last two members of this fourfold division under an even more general type of being—namely, *hylomorphic compound*. But in fact this is not the case. For, as we have also seen (§§8.1–3), Aquinas thinks that in addition to material substances, there are also wholly immaterial substances, such as God and the angels, which are lacking in hylomorphic structure or composition (though in the case of angels, they can be proper parts of things displaying such structure).

But even if we cannot think of substances and accidental unities, for Aquinas, as different types of *hylomorphic compound*, we can still think of them as falling under a more general type of being—namely, *particular*. For on my stipulative use of this term (§1.5), ‘particular’ is a sort of catch-all expression for any type of subsistent (or non-inherent) individual. Thinking of substances and accidental unities as particulars in this sense turns out to be useful, since it enables us to emphasize their differences both from prime matter and from forms (or properties). For insofar as substances and accidental unities are individual, they differ from prime matter; and insofar as they are subsistent (or non-inherent), they differ from forms (or properties). What is more, we can use this same notion of particular to distinguish substances and accidental unities from one another. Thus, we can say that substances qualify as basic particulars, insofar as they are never composed of other subsistent individuals (either because they lack proper parts altogether, as in the case of immaterial substances, or because their proper parts include only prime matter and substantial form, as in the case of material substances). By contrast, we can say that accidental unities qualify as non-basic particulars, insofar as they are always composed of substances, which are themselves subsistent individuals.<sup>1</sup>

In the contemporary metaphysical literature, it is not uncommon for philosophers to think of properties and particulars as falling under an even more general type of being—namely, *things* (or *entities*)—and to contrast the members of this type with *stuff*. Drawing on this contemporary contrast between things and stuff, we can clarify certain aspects of Aquinas’s ontology, as well as bring out some of the substantive commitments of my interpretation, by mapping the members of our original fourfold division onto the following twofold division:

#### **Twofold Division of Being**

- (1) Stuff (i.e., prime matter)
- (2) Things (i.e., entities or individuals)
  - (a) Property (i.e., forms or inherent entities)
  - (b) Particular (i.e., non-inherent entities)
    - (i) Substance (i.e., basic particulars)
    - (ii) Accidental unity (i.e., non-basic particulars)

A few comments on these two divisions of being are in order, especially as regards the ontology of the material world that emerges from them.

First, if the twofold division of Aquinas’s ontology just given is correct, then Aquinas himself would appear to be committed to a version of what Ned Markosian refers to as the “mixed ontology” of stuff and things:

<sup>1</sup> See again §1.5 for this way of dividing substances and accidental unities. See also §12.5 for a complication that the human soul raises for this division.

**The Mixed Ontology:** (i) The material world is fundamentally a world of both things and stuff. (ii) Among the most basic facts about the material world are facts about things and also facts about stuff. (iii) The most accurate description of the material world must be in terms of both things and stuff. (iv) Thing talk and quantification over things, as well as stuff talk and quantification over stuff, are both ineliminable. (Markosian 2004, 413)

Stuff ontologies of any sort are in the minority, both historically and in contemporary philosophy. Hence, thinking of Aquinas's ontology in terms of the twofold division of beings, into *stuff* and *things* helps to bring out its significance. At the same time, however, there is something potentially misleading about this way of dividing Aquinas's ontology. This brings us to a second point.

It is tempting to suppose that if the twofold division of Aquinas's ontology is correct, this can only be because Aquinas himself regards *stuff* and *things* (or *prime matter* and *individuals*) as the most fundamental types of being there are. In fact, however, this is not the case. On the contrary, just as *stuff* and *things* exist in fundamentally different ways, for Aquinas, the same is true of different types of *things*. Thus, insofar as forms (or properties) are inherent, he regards them as a fundamentally different type of things than particulars (i.e., non-inherent beings). And even in the case of particulars, Aquinas regards them as coming in fundamentally different types—namely, substances and accidental unities (i.e., basic and non-basic particulars). As all of this helps us to see, we must not confuse the generality of a type, for Aquinas, with its fundamentality.<sup>2</sup> For although *stuff* and *things* are among the most general types of being, for Aquinas, and can even be said to represent fundamentally different types of being, they are not *equally* fundamental. On the contrary, *things* is a type that can itself be divided into more fundamental subtypes—namely, *forms*, *substance*, and *accidental unity*. But if that is right, then when it comes to fundamentality (as opposed to generality), our original fourfold division of Aquinas's ontology is preferable to our subsequent twofold division of it in terms of stuff vs. things.

One final point. Although the types of being associated with our original fourfold division must be regarded as more fundamental, for Aquinas, than those associated with our subsequent twofold division, even they cannot be said to represent Aquinas's most fundamental ontological types. For, as we have seen (§2.4, §9.3), Aquinas thinks that the ultimate categories of being must ultimately be understood in terms of distinct, fundamental modes of being (*modi essendi*). But not all the types associated

<sup>2</sup> Something like this distinction is, I think, crucial for understanding Aquinas's views about analogy of being. Aquinas sometimes speaks as if there could be no single (general) sense of 'being' that applies to all things that exist. But without such a sense, it is hard, if not impossible, to make sense of his argument for the claim that being isn't a genus. (For if being were genus, he argues, its differentiae couldn't be beings, since no genus includes its differentia. But that's absurd, since *everything* is a being. See, e.g., SCG 1.25.6.) When Aquinas speaks in this way, therefore, I think it's best to understand him as claiming that there is no single *fundamental* sense of being applicable to all things that exist. Here I am indebted to McDaniel (2009a, 309, n. 38), who makes the same points in connection with Aristotle.

with our original fourfold division correspond to such modes of being. This is perhaps clearest in the case of *substance*. For insofar as God exists in a radically different way than creatures, Aquinas thinks that *substance* itself can be divided into two more fundamental subtypes—*God* and *created substance*—each of which corresponds to a distinct, fundamental mode of being.<sup>3</sup> Something similar is true in the case of *form*. Indeed, here we have not only a general type that can be divided into two more fundamental subtypes—*substantial form* and *accidental form*—but also a subtype that can be further divided in the same way. For, as we saw in Chapter 9 (§9.3), Aquinas thinks that even accidental forms can be divided into more fundamental subtypes, corresponding to the nine distinct fundamental modes of being that they can display.

In the end, therefore, if we want to capture what Aquinas takes to be the most fundamental types of being there are, we must think of his ontology in terms of an even more complicated division of being:

#### Fourteenfold Division of Being

- (1) Prime matter
- (2) Substantial form
- (3–11) Nine types of accidental form (quantity, quality, relation, etc.)
- (12) God
- (13) Created substance
- (14) Accidental unity

Evidently, therefore, when it comes to fundamentality (as opposed to generality), this is the division of being in terms of which Aquinas's ontology must ultimately be understood.<sup>4</sup> And as this division helps to make clear, Aquinas's mixed ontology has a very distinctive character. For according to it, the world does not fundamentally include merely stuff and things, but stuff and thirteen different types of things.<sup>5</sup>

With this understanding of Aquinas's ontology in mind, let us briefly consider the place of objects within it.

In contemporary philosophy, it is possible to distinguish at least three different senses of the term 'object'. In its broadest sense, the term is used to refer to anything

<sup>3</sup> In §2.4, I characterized these modes as *independent particularity* and *dependent particularity*, respectively.

<sup>4</sup> See §11.5 for a complication that suggests one further type of being must be added to this list. See also §2.4, n. 70 for some other possible complications.

<sup>5</sup> It is significant, I think, that when Markosian defines the mixed ontology, he appeals to different types of "ineliminable" quantification to clarify the fundamental difference between stuff and things. (See in particular condition (iv) of his definition.) As indicated in §2.4, I think a similar sort of appeal can be used to clarify Aquinas's views not only about the fundamental types of being, but also about the fundamental modes in terms of which such types are to be distinguished.

that can exist or be thought of. In this sense, the term 'object' is more or less synonymous with the Latin expression '*aliquid*' (literally 'something'), which is one of the so-called transcendentals or terms whose extension the medievals take to be the same as that of 'being' (*ens*).<sup>6</sup> Obviously, in this sense anything in Aquinas's ontology would count as an object.<sup>7</sup>

Philosophers who use the term 'object' in the sense just described do not typically admit a distinction between things and stuff. Indeed, they tend to use 'thing' or 'entity' as equivalent to the sense of 'object' just described. Thus, as E. J. Lowe says at one point:

'Thing', in its most general sense, is interchangeable with 'entity' or 'being' and is applicable to any item whose existence is acknowledged by a system of ontology, whether that item be particular, universal, abstract, or concrete. In this sense, not only material bodies but also properties, relations, events, numbers, sets, and propositions are—if they are acknowledged as existing—to be accounted 'things'. (Lowe 2005, 915)

By contrast, those who admit the distinction between things and stuff typically deny that stuff counts as an object. On the contrary, they often reserve the term 'object' as a synonym for 'thing' or 'entity', where these terms are intended to contrast with 'stuff'. In this second, narrower sense of the term, only Aquinas's forms, substances, and accidental unities would qualify as objects.

There is a third and final sense in which the term 'object' is often used by contemporary philosophers—namely, to refer to any individual other than a property, and hence to what I have been calling a particular. This use of the term is, I think, the one that best corresponds to the ordinary sense of 'object'. And in this sense, which is the narrowest of the three, the only things in Aquinas's ontology that can be said to qualify as objects are substances and accidental unities. Since this ordinary sense of 'object' is obviously the one most relevant for understanding Aquinas's account of material objects, it is the one I shall be employing hereafter.

## 10.2 Material Objects

As we have seen (§8.3), Aquinas takes prime matter to be that in virtue of which things are material and, on his view, only material compounds are composed of prime matter. Moreover, since all material compounds are either substances or accidental unities, and these are the two main types of object that Aquinas recognizes, it follows that material objects just are material compounds. To a first approximation, therefore, we can state Aquinas's account of material objects as follows:

<sup>6</sup> On the transcendentals in medieval thought in general and Aquinas in particular, see Aertsen 1996.

<sup>7</sup> See, e.g., QDV 1.1. See also Laycock 2011, and in particular his discussion of the so-called universal applicability thesis.



**Material Objects—Initial Statement**

To be a material object is to be a hylomorphic compound possessing prime matter—that is, a material substance or a material unity.

Note, however, that this initial statement of Aquinas's views is susceptible to two different interpretations. On the one hand, it can be understood as asserting the identity of material objects with material compounds. Let us call this the *identity interpretation*:

**Material Objects—Identity Interpretation**

To be a material object is to be *identical to* a hylomorphic compound possessing prime matter—that is, a material substance or a material unity.

On the other hand, our initial statement can be understood as asserting something weaker—namely, the numerical sameness of material objects with material compounds. Let us call this the *numerical-sameness interpretation*:

**Material Objects—Numerical-Sameness Interpretation**

To be a material object is to be *numerically the same as* a hylomorphic compound possessing prime matter—that is, a material substance or a material unity.

The first interpretation is, perhaps, the most straightforward or natural understanding of Aquinas's account, and no doubt for this reason is the one taken for granted by his contemporary commentators.<sup>8</sup> But as will, perhaps, already be clear, it is the second interpretation that must be said to represent Aquinas's actual views.

All material compounds possess prime matter. But different types of material compound possess prime matter in different ways. Thus, material substances possess prime matter *directly*, or by having it as an immediate proper part or constituent, whereas material unities possess prime matter *indirectly*, or by having something else (namely, a material substance) as an immediate proper part or constituent.<sup>9</sup> As we have had occasion to note before (§1.2, §6.2), this difference requires us to think of material substances and unities as forming a kind of nested hierarchy of compounds or complexes. If we allow ourselves to adapt an earlier diagram one more time, we can illustrate this pictorially in the way indicated at Fig. 10.1.

<sup>8</sup> See, e.g., Brown 2005, Pasnau 2002, and Stump 2003.

<sup>9</sup> Once again, the definition of immediate proper parthood is as follows: *x* is an immediate proper part of *y* if and only if (i) *x* is a proper part of *y*, and (ii) there is no *z* such that *x* is a proper part of *z* and *z* is a proper part of *y*.

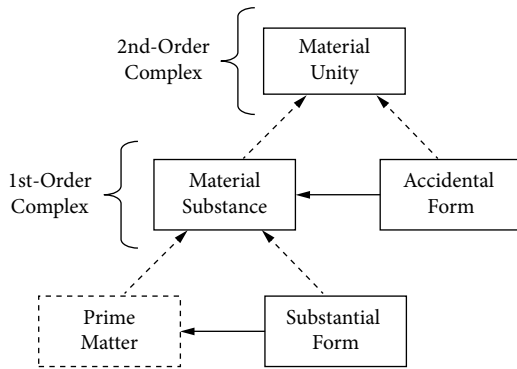


Figure 10.1 Hierarchy of Compounds Possessing Prime Matter

As this diagram serves to remind us, distinct material compounds can share the same prime matter. Indeed, such matter-sharing would appear to be ubiquitous for Aquinas. For material unities cannot exist without having a material substance as an immediate proper part, and material substances, it would seem, cannot exist without being part of some material unity or other. Thus, just as white-Socrates must share the same prime matter as Socrates, evidently Socrates himself must share the same prime matter as some material unity or other (since even if he is not white, he will presumably have to be some color or other). Again, our statue of Athena must share the same prime matter as the lump of bronze from which it is made, and likewise that same lump of bronze must share the same prime matter as some material unity or other (since even if it is not Athena-shaped, it will presumably have to be some shape or other).

This last point is significant, because it helps us to see why the identity interpretation of Aquinas's account of material objects must be rejected. Compounds sharing the same prime matter are co-located for Aquinas. For only compounds possessing prime matter can be "circumscribed by place" (*loco circumscribuntur*); and insofar as two (or more) compounds possess the same prime matter, they will be "circumscribed by" or "fill" the same place.<sup>10</sup> But, then, if material objects are said to be *identical* to material compounds (as the identity interpretation requires), it would follow that material objects themselves can be co-located. But this is something that Aquinas explicitly rejects. Indeed, his rejection of this is precisely what makes his solution to the problem of material constitution so attractive (since it enables us to preserve our common-sense intuitions about the impossibility of co-located material objects).<sup>11</sup>

Aquinas's rejection of co-located material objects is clearest in the case of material substances (such as Socrates and Bucephalus) whose prime matter is wholly distinct.

<sup>10</sup> See again the discussion in §8.3.

<sup>11</sup> See again the discussion in §4.4 and §7.3.

For the matter of such objects, he tells us, is always associated with distinct quantities or dimensions, and hence with distinct and incompatible locations.

[Matter] is related to place insofar as it is subject to dimensions. And so it is from the nature of matter as subjected to dimensions that multiple bodies are prevented from being in the same place. (*In BDT* 4.3.191–194)

But even in the case of distinct compounds that overlap with respect to their prime matter (such as Socrates and white-Socrates or Athena and its constituent lump of bronze), it's clear that Aquinas wants to deny that we have distinct *objects* filling the very same place. To return to a passage that we have already had occasion to consider:

Those things are one in number whose matter is one . . . Indeed, it is on account of matter that a singular thing is both one in number and divided from other things. (*In Meta.* 5.8.876)

Indeed, it was passages such as this one that helped to justify the attribution to Aquinas of a specific version of the doctrine of numerical sameness without identity:<sup>12</sup>

#### **Numerical Sameness without Identity**

For any hylomorphic compounds  $x$  and  $y$ , where  $x \neq y$ , and any time  $t$ ,  $x$  is numerically the same material object as  $y$  at  $t$  if and only if  $x$  and  $y$  share all their prime matter in common at  $t$ .

But, of course, if this doctrine is true, then it is impossible for material objects to be co-located. For in order to be co-located, two (or more) compounds must share the same matter. But insofar as they share the same matter, this doctrine guarantees that they are one and the same material object. When it comes to the nature of material objects, therefore, Aquinas's account must be understood in terms of the numerical-sameness (as opposed to the identity) interpretation. For it is only on this interpretation that we can make sense of his views about co-location.

There are a number of questions that can be raised for this account of the nature of material objects. Before turning to these, however, I want to consider briefly how the account itself situates Aquinas vis-à-vis some important contemporary debates about the nature of material objects.

### **10.3 Thomistic Extensionism**

In the contemporary literature, it is standard to think of the nature of material objects as bound up with their existence in space (or spacetime). Indeed, on one popular

<sup>12</sup> See again the discussion in §4.4.

contemporary account, material objects just are objects possessing spatial locations.<sup>13</sup> Let us call this view *locationism* and characterize it as follows:

**Locationism**

To be a material object is to be an object with spatial location.

Aquinas agrees with the locationists that all material objects have spatial location. But he denies that the mere possession of spatial location is sufficient for being a material object, since he thinks even God and the angels can be said to have spatial location (§8.3). To be a material object, for Aquinas, it is necessary to possess a distinctive type of spatial location—namely, that associated with “filling” a place or possessing “extension in the three dimensions”. For the same reason, Aquinas’s views have much more in common with another account of material objects, one that is prominent in the history of philosophy but no longer so popular:<sup>14</sup>

**Extensionism**

To be a material object is to be an object possessing three-dimensional, spatial extension.

Like locationism, extensionism makes reference to spatial location in its account of material objects. But in requiring that such location always involves spatial extension, it rules out the possibility of unextended material objects.<sup>15</sup> This consequence is often regarded as an unacceptable cost of extensionism, and hence as giving us a reason to prefer locationism instead. For at least in principle, it is suggested, we ought to allow for the possibility of point-sized material objects (such as quarks or protons or other subatomic particles).<sup>16</sup>

There are, however, several things to be said in response to this objection. First, it is not obvious that there are, or even could be, point-sized objects. Aquinas, as we have noted (§5.4), follows Aristotle in rejecting all forms of atomism, and with it the claim that a continuous object could be composed of any sort of indivisibles, much less

<sup>13</sup> See Markosian 2000 for a defense of this account and Hudson 2006 for critical discussion. As Hudson points out (2–3), the main objection to this account has to do with its implications for regions of space (or spacetime)—namely, that it either excludes such regions from the class of material objects or requires them to be co-located with the objects that occupy them. This objection won’t, of course, trouble anyone who denies the existence of regions, and hence accepts a form of relationism (as opposed to substantivalism).

<sup>14</sup> See, e.g., Descartes, *Principles of Philosophy* 1.53 and Hobbes, *De Corpore* 2.8.1.

<sup>15</sup> The term ‘extensionism’ is sometimes used merely for the denial of the actuality (as opposed to the possibility) of unextended material objects. See, e.g., Rea 2001.

<sup>16</sup> See again Markosian 2000.

point-sized atoms. And the same considerations that motivated Aristotle himself continue to be discussed, developed, and taken seriously today.<sup>17</sup>

Second, even if there could be point-sized objects, it is not obvious that they should qualify as material. As Peter van Inwagen points out in the course of discussing the common-sense conception of material objects:

A thing is a material object if it occupies space and endures through time and can move about in space (literally move about, unlike a shadow or a wave or a reflection) and has a surface and has a mass and is made of certain stuff or stuffs. Or, at any rate, to the extent that one was reluctant to say of something that it had various of these features, to that extent one would be reluctant to describe it as a material object. (van Inwagen 1990, 17)

On the basis of these sorts of consideration, we might well be reluctant to call a quark or a photon a material object. Indeed, as van Inwagen himself points out, “talk about the surfaces of submicroscopic objects, or about the stuffs they are made of, tends to verge on nonsense” (17).

Third and finally, there is the point that Aquinas himself presses—namely, that spatial location isn’t sufficient by itself to qualify an object as material, given the possibility of spatially located immaterial objects (such as God and the angels). For the same reason, it might seem that we need to appeal to a specific type of spatial location to distinguish material objects, and unlike extensionism, locationism appears to lack the resource to mark such a distinction.

However this dispute is resolved, it should be clear that Aquinas himself does not accept the usual form of extensionism. Just as our initial statement of Aquinas’s account of material objects was susceptible to more than one interpretation, the same is true of our initial statement of extensionism. The usual form of extensionism is represented by what we might call the identity interpretation:

**Extensionism—Identity Interpretation**

To be a material object is to be *identical to* an object possessing three-dimensional, spatial extension.

By contrast, Aquinas himself must be said to accept a numerical-sameness interpretation of extensionism:

**Extensionism—Numerical-Sameness Interpretation**

To be a material object is to be *numerically the same as* an object possessing three-dimensional, spatial extension.

<sup>17</sup> Rea 2001, 130 makes this point. See Simons 2004 for further reasons. See also Schaffer 2010 (esp. §2.4) and Zimmerman 1996b for relevant discussion.

Only the second version of the doctrine is consistent with Aquinas's account of material objects. Once again, therefore, we can see that his appeal to the doctrine of numerical sameness without identity makes his conception of material objects distinctive.

## 10.4 Identity vs. Numerical Sameness Revisited

I want to close by considering a few implications of Aquinas's account of material objects, as well as a few of the difficulties that it raises.

Consider again our now familiar example of a statue and the lump of bronze from which it is made. It is clear that the statue and lump are distinct compounds for Aquinas. Indeed, they are not only distinct compounds, but distinct *types* of compound—because the lump is a material substance and the statue is a material unity. At the same time, however, each qualifies as an object in the ordinary sense. For statues and lumps are particulars for Aquinas, and particulars qualify as objects in the ordinary sense (§10.1). But all of this might appear to be incoherent. If the statue is an object and the lump is an object, and yet the statue is distinct from the lump, how can it be denied that the statue and lump are distinct objects? After all, the following general principle for counting would appear to be impeccable:

### Principle for Counting

For any beings  $x$  and  $y$ , and any sortal  $F$ , if  $x$  is an  $F$ ,  $y$  is an  $F$ , and  $x \neq y$ , then  $x$  and  $y$  are two distinct  $F$ s.

What is more, Aquinas himself endorses this principle when it comes to counting beings under sortals such as *hylomorphic compound*. How, then, can he deny it when it comes to counting them under sortals such as *material object*?

The short answer is that the sortals in question are of very different types for Aquinas. As we have seen, *hylomorphic compound* is a technical philosophical sortal introduced as part of his broadly Aristotelian analysis of change. And like other such sortals—including *prime matter*, *form*, *substance*, and *accidental unity*, as well as the more general sortals under which they fall, such as *stuff*, *things*, and *particular*—they are governed by identity. That is to say, the beings to which they apply must be counted by identity. By contrast, *material object* is a common-sense sortal governed by numerical sameness rather than identity; the beings to which it applies must be counted, not by identity, but rather by numerical sameness. Indeed, as we noted in the context of our defense of the Thomistic solution to the problem of material constitution (§7.3), this understanding of the sortal appears to be required by our ordinary intuitions about individuation or counting more generally.

As all of this helps us to see, in the context of Aquinas's ontology, we must distinguish two very different types of sortal—what we might call *identity* vs. *numerical-sameness sortals*. Moreover, since the principle for counting just mentioned holds good only for identity sortals, it must be explicitly relativized to them:

**Principle for Counting under Identity Sortals**

For any beings  $x$  and  $y$ , and any identity sortal  $F$ , if  $x$  is an  $F$ ,  $y$  is an  $F$ , and  $x \neq y$ , then  $x$  and  $y$  are two distinct  $F$ s.

The same principle fails, however, when it comes to numerical-sameness sortals. For to admit the existence of numerical-sameness sortals is to admit the possibility of beings that are distinct relative to one sortal, but numerically the same relative to another. More precisely:

**Relative Sameness**

For some beings  $x$  and  $y$ , some identity sortal  $F$ , and some numerical-sameness sortal  $G$ ,  $x$  and  $y$  are two distinct  $F$ s but numerically one and the same  $G$ .

Note that the doctrine of numerical sameness without identity, as stated earlier (§10.2), is just a particular specification of such relative sameness—namely, one in which *hylomorphic compound* is substituted for  $F$ , and *material object* is substituted for  $G$ .<sup>18</sup>

There can be no denying that the distinction between identity and numerical-sameness sortals brings with it certain theoretical costs. But since we have already dealt with these at some length in Chapter 7 (esp. §§7.3–5), I will touch here only on the two most obvious and important costs that remain.<sup>19</sup>

The first cost has to do with the nature of number or counting. It is standard to define number in terms of identity. But if there are numerical-sameness sortals, in addition to identity sortals, the standard definitions will hold good only for the latter:

<sup>18</sup> It is worth noting that *material object* is not the only numerical-sameness sortal that Aquinas is committed to recognizing. For *material object* is itself a specification of the more general sortal, *object*, which is in turn a specification of the most general sortal, *being*. But, then, insofar as two (or more) distinct compounds share the same matter, they are not only the same *material object*, but also the same *object* or *being* as well. Something like this is already implicit in the more general statement of the doctrine of numerical sameness without identity that we arrived at in §6.4.

<sup>19</sup> In what follows, I build especially on points made in Brower and Rea 2005. But see also Brower 2004b, Rea 1998a, and Rea 2009.

### Definitions of Number for Identity Sortals

- (1) There is exactly one  $F =_{def} \exists x[Fx \ \& \ \forall y(Fy \equiv y = x)]$ ;
- (2) There are exactly two  $Fs =_{def} \exists x \exists y[Fx \ \& \ Fy \ \& \ x \neq y \ \& \ \forall z(Fz \equiv z = x \vee z = y)]$ ;
- (3) ...

By contrast, when it comes to numerical-sameness sortals, we shall have to introduce a new set of definitions for number:

### Definitions of Number for Numerical-Sameness Sortals

- (1\*) There is exactly one  $F =_{def} \exists x[Fx \ \& \ \forall y(Fy \equiv y \text{ is numerically the same as } x)]$ ;
- (2\*) There are exactly two  $Fs =_{def} \exists x \exists y[Fx \ \& \ Fy \ \& \ x \text{ is not numerically the same as } y \ \& \ \forall z(Fz \equiv z \text{ is numerically the same as } x \vee z \text{ is numerically the same as } y)]$ ;
- (3\*) ...

As these definitions make clear, the distinction between identity and numerical-sameness sortals makes the business of counting considerably more complicated than it otherwise would be. Indeed, it forces us to distinguish two different styles of counting, one for each of the different types of sortal in question. Even so, there is nothing obviously incoherent or even especially radical about accepting such complications, once it is recognized that these more complicated styles of counting appear to be implicated in our ordinary counting practices (§7.3). Moreover, there would appear to be a clear sense in which these two styles of counting are unified. Indeed, we could, if we like, define number in general in terms of numerical sameness, since everything is to be counted by numerical sameness. And then we could think of these two styles of counting as telling us how to proceed in specific cases, since some sortals (maybe most) are such that their members are numerically the same when, and only when, they are identical, whereas other sortals are such that their members can be numerically the same without being identical.

The other main theoretical cost associated with the distinction between identity and numerical-sameness sortals has to do with a certain ambiguity it introduces. Whenever we have a single object or being, we can always ask questions of the following sort: What is this being? What are its essential properties or characteristics? Is it identical to itself? It is tempting to think, moreover, that such questions always have a straightforward answer. In the case of objects or beings to which identity sortals apply, this will always be true. Thus, in the case of Socrates's matter, we can say that it is a portion of prime matter, that it possesses all and only the essential characteristics associated with portions of this kind (non-individuality, the capacity for being compounded and divided, etc.), and that it is identical to itself. And we can say similar things in the case of Socrates's forms (such as his *humanity* or *whiteness*).



By contrast, things are much more complicated in the case of objects or beings to which numerical-sameness sortals apply. Thus, consider again our statue and lump, and suppose that they fill some place *P*. Although the statue and lump are distinct particulars or compounds, they are one and the same object—indeed, they are the only object in *P*. But suppose we now ask: What is this object? What are its essential characteristics? Is it identical to itself? In response to the first question, it must be said that the single object is both a statue and a lump. The reason for this is that, unlike the case of Socrates's prime matter or forms, which are associated with a single identity sortal, the object in *P* is associated with more than one identity sortal—namely, both *statue* and *lump*. But precisely because the object in *P* is associated with these two identity sortals, the other questions—What are *its* essential characteristics? Is *it* identical to *itself*?—cannot be answered, at least apart from further information about whether the possessive pronouns here are supposed to refer to a statue or a lump. Indeed, in this case, both the pronouns, as well as the noun that they refer back to (namely, 'the object in *P*'), are ambiguous and hence must be disambiguated before we can answer these further questions. This might appear to imply that there are really two objects in *P* after all. But that is because we are accustomed to finding ambiguity only in cases where a noun or pronoun refers to *two* such objects rather than one. However, if the doctrine of numerical sameness without identity is true, we should also expect to find such ambiguity in cases of numerical sameness. This is, of course, a theoretical cost. But once again, it is neither incoherent nor even obviously prohibitive—especially if we take into account the other benefits that the doctrine brings with it.<sup>20</sup>

One final point. I have spoken as if *statue* were clearly an identity sortal for Aquinas. And, indeed, Aquinas often uses the term 'statue' (*statua*) as if it were a specific type of accidental unity (e.g. *DPN* 1–2), where *accidental unity* clearly is an identity sortal. Interestingly, however, there are passages where Aquinas seems to suggest that the term 'statue' functions more like a numerical-sameness sortal, and hence one that involves the sort of referential ambiguity associated with such sortals. Consider, for example, the following passage where he is exploring the question of whether a statue that is destroyed can be said to be the same as some statue that is subsequently made out of the same material:

Artifacts are all placed in a genus or species in one of two ways: either in virtue of their matter or in virtue of their form... For the same reason, I assert that if the statue is considered as placed in its genus or species in virtue of its matter, then the same statue is remade. On the other hand, if it is considered as placed in its genus or species in virtue of its form, then I assert that the same statue is not remade, but another one is made. For there is one form for this statue, and another form for that one. (*Quod.* 11.6 ad 3)

<sup>20</sup> See again the discussion in Ch. 7, esp. the summary in §7.6 ("Final Scorecard").

In this passage, Aquinas is considering an example that involves a lump of material (in this case gold rather than bronze), which is initially cast in the shape of a statue (say, Athena), and later melted down and then cast again in the same shape. Thus, the example involves two distinct hylomorphic compounds, which are such that each of the following holds true of them: (i) they exist at different times, (ii) they completely overlap with respect to their matter, (iii) they are wholly distinct with respect to their forms, and yet (iv) their distinct forms exactly resemble each other. Aquinas then asks: Can we say that the two hylomorphic compounds are one and the same statue?

The answer, he suggests, depends on how we individuate statues. If we individuate them in terms of their form, the answer is clearly 'no'. For the example involves two distinct (even though exactly resembling) forms of statuehood. On the other hand, if we individuate statues in terms of their matter, the answer will be 'yes'. For the example involves only one portion of prime matter. What is more, Aquinas seems to be suggesting, we can think of statues as being individuated in either way. And the natural explanation for this is that, as he sees it, the term 'statue' is, at least sometimes, ambiguous in precisely the way that terms such as 'object' are. Thus, although we can treat *statue* as an identity sortal if we like, there are also some grounds for treating it as a numerical-sameness sortal. And depending on how we treat it, the answer to his original question will vary.

If what Aquinas says here about statues can be generalized, then he may end up being committed to a host of different numerical-sameness sortals—including not only *material object*, *object*, *being*, and *statue*, but also sortals corresponding to some or perhaps even all of the names of other artifacts. This, of course, further complicates some of the issues we considered in Chapter 9—in particular, the question of whether artifacts can be substances, for Aquinas. But it also highlights the need to appeal to such sortals, if we are to make sense of Aquinas's views about material objects more generally.

## PART V

# Complications

# 11

## Non-Standard Changes and Forms without Substrata

In Parts II–IV (Chs 3–10), I focused on clarifying the essential elements of Aquinas’s ontology of the material world—in particular, his views about change, hylomorphism, and material objects. To avoid distraction, as well as to maintain my focus on only the essential elements, I had to ignore, or at the very least de-emphasize, a host of complications that arise for Aquinas’s views, especially insofar as they bear on certain aspects of his theology. In the fifth and final part of the book (Chs 11–13), I offer a brief but systematic look at some of the relevant complications. My discussion in this part is not intended to be exhaustive; and given the nature of the complications themselves, I cannot hope to do complete justice even to those that I discuss. Nonetheless, by examining a few representative examples, I hope to give a sense of the sort of refinements, extensions, and, in some cases, radical modifications that such complications introduce into Aquinas’s ontology.

In this chapter, I focus on certain complications associated with Aquinas’s views about matter, form, and change. I begin by discussing two types of substantial change that do not conform to his general account of change as generation and corruption. I then turn to some considerations that led him to embrace the possibility of forms without matter or substrata, in the case of both accidental and substantial forms. For reasons that will become clearer in due course, these complications forced Aquinas to introduce some significant modifications to his ontology as a whole.

### 11.1 Transubstantiation

In Part II (Chs 3–4), we examined Aquinas’s general account of change as generation and corruption, as well as the two main subtypes into which all such changes can be divided—namely, substantial vs. accidental change. In the course of this examination, I alluded to a type of substantial change recognized by Aquinas that does not conform to his general account—namely, *transubstantiation*. Although I want to begin my discussion here by returning to it, we shall see shortly (§11.2) that transubstantiation is but one of two such types of substantial change.

According to Christian scripture and tradition, when Christ gathered his disciples together for one last supper before his death, he instituted the communal practice of

breaking bread and drinking wine. As the apostle Paul reports to the members of an early church at Corinth:

I received from the Lord that which I also delivered to you, that the Lord Jesus in the night in which He was betrayed took bread; and when He had given thanks, He broke it and said, "This is My body, which is for you; do this in remembrance of Me." In the same way He took the cup also after supper, saying, "This cup is the new covenant in My blood; do this, as often as you drink it, in remembrance of Me." (1 Cor. 11.23–25)

In line with Roman Catholic theology, Aquinas refers to the practice in question as *the Eucharist*, or *the Sacrament of the Altar*, and takes it to involve a special type of change. Thus, when the priest recites Christ's words of institution, "*This is my body . . . and this is my blood*", at the appropriate point in the liturgy and in the presence of bread and wine, Aquinas thinks that the bread and wine themselves (or better, their substance as opposed to their accidents) are miraculously changed into the body and blood of Christ. For obvious reasons, this special type of change is traditionally referred to as *transubstantiation*.<sup>1</sup>

To begin appreciating some of the complications that transubstantiation introduces for Aquinas's views about change, it will be useful to contrast it with a more ordinary case of substantial change. Consider again, therefore, our stock example of the generation of a human being. Strictly speaking, Aquinas thinks of this example as involving a case of *many-one* change. That is to say, he thinks of a human being, such as Socrates, as being generated from a pair of distinct substances (namely, sperm and menstrual blood). I will return to Aquinas's views about many-one change shortly, and hence to the strict and proper understanding of this example. But in order to facilitate its comparison with transubstantiation, I will for now uphold the pretense (explicitly introduced in §5.1) that Aquinas thinks of Socrates as being generated from a single substance (namely, a zygote), and hence as if the example itself could be understood as a case of a *one-one* change.<sup>2</sup> In that case, we can represent the change involved in this example along the lines of the diagram at Fig. 11.1.

This diagram is intended to remind us of how Aquinas's views about ordinary substantial change fit within his general account of change as generation and corruption. Like other changes satisfying his general account, ordinary substantial change always involves at least two compounds, one of which is generated (in this case, Socrates), and the other of which is corrupted or destroyed (in this case, the zygote). Like other cases of generation and corruption, moreover, the compounds

<sup>1</sup> Aquinas thinks that the occurrence of transubstantiation in the context of the Eucharist is implied by a literal understanding of Christ's original words of institution. Indeed, Aquinas thinks not only that a change of this type occurs whenever a Catholic priest recites the words of institution, but also that such a change occurred when Christ himself first uttered those words at the last supper. See *ST* 3.81.1.

<sup>2</sup> Again, I hasten to emphasize that this pretense is a mere convenience, and in upholding it I do not intend to be taking a stand on any of the substantive metaphysical or interpretive issues surrounding Aquinas's embryology, all of which are highly controversial. See again §5.1, n. 1.

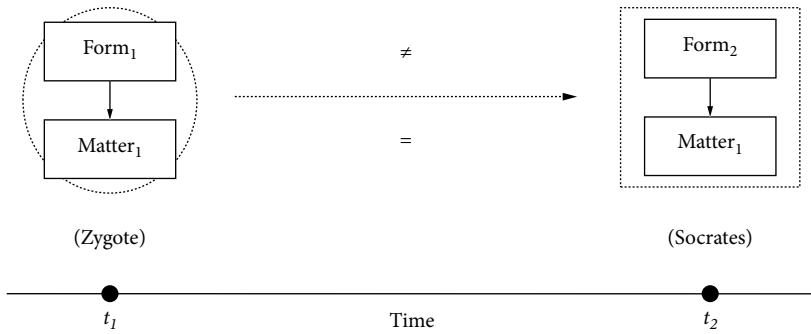


Figure 11.1 Ordinary Substantial Change

involved in ordinary substantial change are always related in such a way that, although they exist at different times and are wholly distinct with respect to their forms, they nonetheless overlap with respect to their matter (in this case, matter<sub>1</sub>). Indeed, the only respect in which ordinary substantial change differs from other changes satisfying Aquinas's general account has to do with the specific types of matter, form, and compound they involve—namely, prime matter, substantial forms, and material substances.

If we return to transubstantiation with this example in mind, we can see that it resembles ordinary substantial change in certain respects. For transubstantiation always involves distinct compounds—the bread and wine on the one hand, and the body and blood of Christ on the other. And like ordinary substantial change, the compounds involved in transubstantiation are composed of prime matter and substantial form, and hence qualify as material substances.

That said, however, there is a crucial respect in which transubstantiation is unlike ordinary substantial change, or indeed any change satisfying Aquinas's general account, whether substantial or accidental. The compounds involved in transubstantiation do not overlap with respect to their matter. On the contrary, they are always wholly distinct with respect to both form and matter. To bring out this crucial difference, we can contrast the sort of change that takes place in the Eucharist (say, when the bread becomes the body of Christ) with that which takes place in the generation of a human being using the diagram at Fig. 11.2.

As this diagram helps to make clear, insofar as the relata of the change involved in transubstantiation are wholly distinct, the change itself cannot strictly be said to involve any enduring matter or substratum. For the same reason, it cannot strictly be said to involve any generation or corruption. That Christ's body is not generated by the change is perhaps obvious, since it pre-exists the change as that into which the bread is miraculously changed. (Insofar as Fig. 11.2 suggests that Christ's body comes into existence at  $t_2$ , it is misleading.) But even the bread cannot strictly be said to undergo any corruption, since it is changed, *as a whole*, into Christ's body. For the

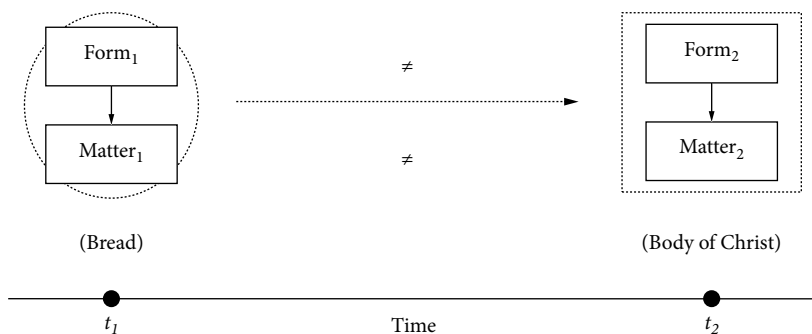


Figure 11.2 Transubstantiation

same reason, Aquinas prefers to describe the change involved in the Eucharist in terms of *conversion* (*conversio*) rather than generation and corruption.

But if transubstantiation lacks an enduring substratum, and hence fails to involve any generation and corruption, it might be wondered why Aquinas insists on thinking of it as a type of change at all. For, as we have seen, he appears to deny that creation and annihilation are changes precisely because they lack an enduring substratum (§3.1). Why not say something similar here?

Aquinas is aware of this concern. In fact, he imagines an objector raising it in almost precisely the form in which we've just considered it:

It seems that bread cannot be converted into the body of Christ. For conversion is a type of change (*mutatio*). But in every change there must be something that serves as the substratum, something that starts off in potentiality and afterwards is in actuality; for as it is said in *Physics* 3, change (*motus*) is the actuality of something existing in potentiality. There is, however, nothing to serve as the substratum for the substance of the bread and body of Christ. (ST 3.75.4 obj. 1)

Aquinas's response to this objection is initially somewhat puzzling:

This objection holds good in the case of formal change, because it is proper to a form to be in matter or in a substratum. But the objection does not hold good in the case of the conversion of a whole substance. Such a substantial conversion requires a certain ordering of substances, one of which is converted into the other. For the same reason, both substances serve as the substratum with respect to order and number. (ST 3.75.4 ad 1)

Even if the passage as a whole is somewhat puzzling, the overall point that Aquinas wants to make in it should be clear. There are two different types of change. First, there is the type that involves some enduring matter or substratum. Aquinas refers to this type of change as *formal change*, since it always involves matter taking on distinct forms. Second, there is the type of change involved in transubstantiation. Aquinas says that this type of change involves the conversion of a whole substance, and although it does not strictly involve any enduring matter or substratum, he suggests

that it can be thought of as involving such a substratum, insofar as the converted substance (in our case, the bread) comes to be one in number with some substance toward which the possibility of its conversion orders it (in our case, the body of Christ). Still, what remains puzzling—and what this last suggestion merely serves to underscore—is why Aquinas insists on thinking of transubstantiation as a type of change at all, especially when he already recognizes examples of efficient causation, such as creation and annihilation, that do not involve any change.

The resolution of this puzzle is, I think, hinted at in the objector's reference to book 3 of Aristotle's *Physics*—and in particular to the characterization of change there as “the actuality of something existing in potentiality”. Indeed, I think Aquinas's response to the objection is intended to suggest that careful attention to this characterization requires the classification of transubstantiation as a type of change.

In ordinary substantial change, as well as formal change more generally, there is always the actualization of some potentiality—namely, the potentiality of some substratum to take on a distinct form or property. Indeed, it is precisely because formal change involves the actualization of such a potentiality that it requires an enduring substratum in the first place.<sup>3</sup>

In transubstantiation, by contrast, no potentiality of this sort gets actualized, and hence there is, strictly speaking, no enduring substratum. Even so, as Aquinas's response is intended to suggest, transubstantiation does involve the actualization of a potentiality, and hence a substratum of some sort. Actually, it's probably better to speak here of a pair of substrata and potentialities. Thus, in our example, there is the bread which is a substratum for the active potentiality to be converted into the body of Christ, and there is the body of Christ which is a substratum for the corresponding passive potentiality for the bread to be converted into it.

This pair of substrata and potentialities is, I think, what explains Aquinas's talk of the “ordering of substances, one of which is converted into the other”. And the actualization of these same potentialities, I take it, is what explains his insistence that transubstantiation satisfies the characterization of change in the *Physics*. Indeed, since the actualization of these two potentialities requires that one of their substrata becomes the other, we can see why Aquinas would describe transubstantiation itself as involving an enduring substratum in an extended sense. For insofar as some bread becomes “one in number” with the body of Christ, the actualization of that bread's active potentiality will just be the actualization of the corresponding passive potentiality of Christ's body.<sup>4</sup> What is more, Aquinas suggests elsewhere that it is only because of the actualization of this latter capacity that Christ himself comes to be located where the bread was (*ST* 3.76.1 and 5)—something that would presumably be

<sup>3</sup> See again the discussion in §3.3.

<sup>4</sup> Although in some contexts it is important to distinguish numerical sameness from identity, in the context of the Eucharist I think it is clear that Aquinas is thinking of “oneness in number” in terms of identity.



required to distinguish a genuine case of transubstantiation from one in which God merely annihilates some consecrated bread and at the same time puts Christ in the same location, in the guise of such bread.

There are, of course, serious questions about whether there are or even could be any such potentialities. I cannot attempt to address such questions here. Instead, I merely want to note that if my interpretation of Aquinas is correct, then we can see why he would think that commitment to transubstantiation complicates his general account of change as generation and corruption. Indeed, in light of my interpretation, we can see why, far from requiring an ad hoc departure from Aquinas's general account, such commitment rather calls our attention to a further possibility implicit in the considerations that give rise to this account in the first place. This possibility is presumably not one that would have occurred to Aristotle or indeed to anyone not already committed to something like transubstantiation. Even so, Aquinas thinks, it is nonetheless genuine for all that; any Aristotelian who wanted to account for the conceptual possibility of one thing being converted into another thing might, plausibly, have explained it in this way. Intuitively, for some change to occur, there must be something that is changed—or better, something that doesn't merely come into being or pass away, as in creation or annihilation, but rather comes into being *from* or passes away *into* another. In order for the latter to occur, it is tempting to suppose that a substratum must not only have some potentiality that gets actualized, but also that the substratum itself survives the actualization of this potentiality. But, Aquinas thinks, transubstantiation helps us to see that this is not the case. In order for the relevant sort of potentiality to get actualized, it is sufficient for there to be a substratum that *becomes* something else. For in that case, we can still speak of *its* potentialities being actualized—and hence *its* passing away *into* something else—even though *it* does not strictly survive.

Although Aquinas is happy to speak of transubstantiation as involving an enduring substratum in an extended sense, in order to emphasize its kinship with other types of change, it might be better to say that change as such does not require endurance for him. Indeed, I think it would be best to say that not all change requires the generation or corruption of compounds, for Aquinas, and hence needn't satisfy his "general" account at all. Change as such requires only that a potentiality associated with some matter or substratum gets actualized. And this, in turn, requires the existence of distinct compounds, which are such that they exist at distinct times and are wholly distinct with respect to their form. But it does not require that the compounds in question overlap with respect to their matter. On the contrary, it requires only that their matter is, by the end of the change, one in number. If such matter does, in fact, overlap, then we will have formal change; if not, we will have transubstantiation. For the same reason, we can now see that what we referred to as Aquinas's "general" account of change in Chapter 3 is really an account of formal change, and hence is general only in the sense that it admits of two further subtypes—namely, substantial and accidental changes with respect to form.

We're now at last in a position to appreciate Aquinas's reason for denying that both creation and annihilation qualify as changes of any sort. Ultimately, it is not the lack of any enduring matter or substratum that disqualifies them—though we can now understand why Aquinas might speak as if it were. On the contrary, what prevents them from qualifying as changes is that they don't involve the relevant sort of actualization of potentiality. For something to be created, Aquinas thinks, it must come into existence *ex nihilo*. Likewise, for something to be annihilated, it must pass out of existence *in nihilum*. But if that is right, then neither creation nor annihilation involves distinct compounds serving as its termini, much less distinct compounds whose matter is related in the way required for the relevant sort of actualization of potentiality.

There is more to be said about transubstantiation, especially insofar as it bears on Aquinas's views about the forms involved in change. But before leaving the topic of the matter or substrata involved in change, I want to look at one further complication for Aquinas's view—one that requires us to return to his understanding of many—one changes.

## 11.2 Transmateriation

Consider again Aquinas's favorite example of ordinary substantial change—namely, the generation of a human being. And let us now think of it as Aquinas himself does—that is, as a case of many—one change (involving the corruption of both sperm and menstrual blood) rather than as a case of one—one change (involving merely the corruption of a zygote). In that case, we can more accurately represent the example itself using the diagram at Fig. 11.3.

As this diagram helps to make clear, on the proper understanding of Aquinas's example, it involves three distinct substances, none of whose matter or form is identical. In this respect, it is more like a case of transubstantiation than it is like other formal changes. Unlike transubstantiation, however, the matter of the substances serving as the termini of the change does overlap. Indeed, in this example, Socrates's matter is just the sum of the matter associated with both the sperm and the menstrual blood. In this respect, and most others, it is much more like other formal changes than transubstantiation. For such overlap of matter guarantees the endurance of matter (indeed, the endurance of the matter associated with two different substances). And such endurance, in turn, guarantees both (a) that there are distinct forms with respect to which the enduring matter is changed, and hence (b) that there are distinct compounds generated and corrupted by the change. Finally, unlike transubstantiation, ordinary many—one substantial changes need not involve any special divine intervention.<sup>5</sup>

<sup>5</sup> Although, for reasons having to do with the special nature of the human soul to be discussed shortly (§11.4), Aquinas does think that the many—one changes involved in the generation of specifically *human*

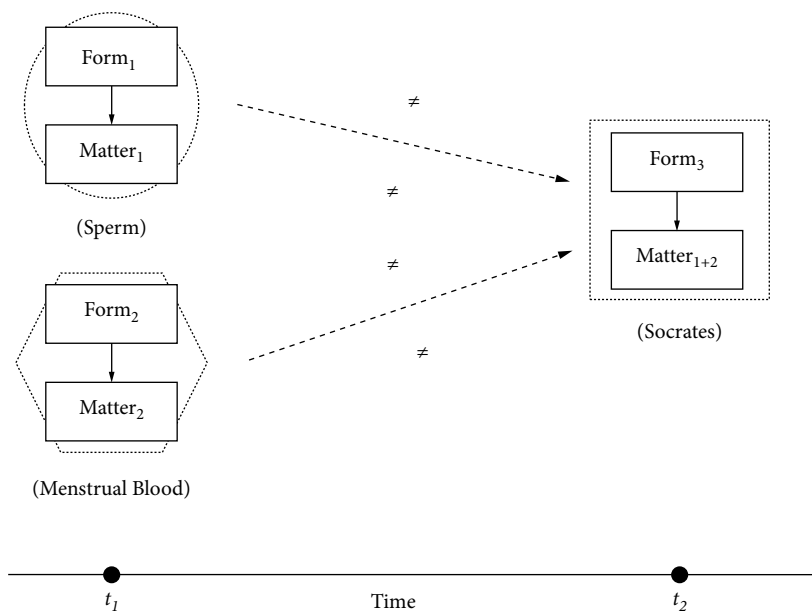


Figure 11.3 Ordinary Many-One Substantial Change

Although changes like the one just described involve some complications, Aquinas thinks that they ultimately conform to his general account of change as generation and corruption, and hence qualify as formal changes. Indeed, as examples like this one serve to remind us, Aquinas's general account is meant to cover not only one-one changes, but also changes that are many-one, one-many, or even many-many. Even so, as a little further reflection on one particular type of ordinary many-one change will confirm, Aquinas is committed to recognizing yet another type of substantial change that *cannot* be said to conform to his general account of change as generation and corruption.

Consider an ordinary example of nourishment (or metabolic change): Socrates eats a piece of bread, which is subsequently digested by him and absorbed into his body. As we have seen (§9.4, §11.1), bread is a substance, for Aquinas; and its digestion obviously results in its corruption. Insofar as this example involves the corruption of a substance, therefore, it clearly involves a substantial change of some sort. Even so, this example is significantly different from other, ordinary examples of substantial change, for it does not involve the generation of any new substance. On the contrary, as Aquinas himself describes the process of nourishment, it merely

life do require such divine intervention. Indeed, Aquinas thinks that each human soul is directly created by God. See, e.g., *ST* 1.90.3–4. Even so, the sperm and menstrual blood example works just as well in the case of certain non-human animals, where Aquinas thinks no special miracle occurs.

involves some pre-existing substance (in this case, Socrates) “absorbing” the matter associated with that which does the nourishing (in this case, the bread):

To nourish is an activity associated not with form, but with matter, which takes on the form of the one it nourishes, whereas the form of what does the nourishing ceases to exist. (*ST* 3.77.6)

As applied to our particular example, this understanding of nourishment requires three things. First, when the bread eaten by Socrates is digested, the form associated with it (i.e., the substantial form inhering in the bread’s matter) ceases to exist. This, of course, is precisely what brings about the bread’s corruption. Second, the matter associated with the bread (i.e., a particular portion of prime matter) is compounded with Socrates’s own matter (i.e., a distinct portion of prime matter). Third and finally, as a result of being compounded with Socrates’s matter, the matter originally associated with the bread “takes on the form” of Socrates himself. That is to say, it comes to be informed by his substantial form—or better, it comes to be a proper part (or subportion) of some matter that is so informed. For the sake of contrast with ordinary many–one substantial change, we can represent this example using the diagram at Fig. 11.4.

As this diagram helps to make clear, ordinary nutrition presents us with a type of substantial change that is distinct from all other types that we’ve considered so far. It is obviously unlike transubstantiation, insofar as it is both naturally occurring and involves the endurance of matter. Indeed, in these two respects it is like most

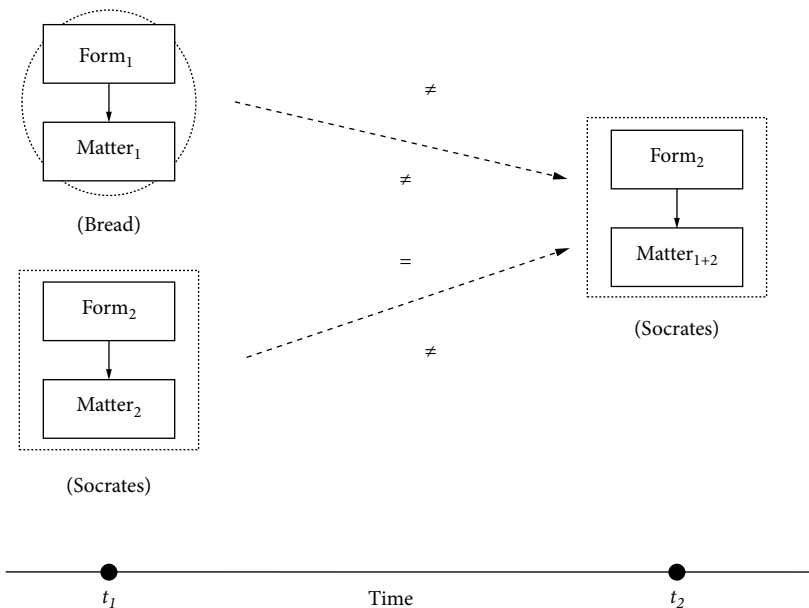


Figure 11.4 Ordinary Nutrition

ordinary substantial changes. But unlike all other changes of the latter sort, it involves no generation, only corruption. That is to say, it requires no new substances to come into existence, only some pre-existing substances to cease to exist. For the same reason, it doesn't require any new substantial forms to come into existence, only some pre-existing substantial forms to go out of existence. Moreover, it seems clear that there can be substantial change of this sort running in the opposite direction—that is to say, one-many substantial changes that involve generation, but no corruption. Indeed, Aquinas thinks that ordinary material substances, such as Socrates, are constantly losing small portions of matter over time.<sup>6</sup> But, of course, the loss of such matter doesn't result in the corruption of Socrates, even if it does result in the generation of new substances partly composed of matter that previously belonged to Socrates. Thus, when Socrates loses some “dead skin”, Aquinas thinks that some of his prime matter ceases to be informed by the substantial form of Socrates (or better, it ceases to be part of the total portion of prime matter so informed) and comes instead to be informed by a new substantial form—say, an elemental form.

Aquinas sometimes speaks as if substantial changes of the sort that we are now considering always involve both generation and corruption, at least in a broad sense. This way of speaking allows him to preserve the spirit of the Aristotelian dictum that “the corruption of one thing is the generation of another and vice versa” (*On Generation and Corruption* 1.3, 318a24–5), as well as to emphasize that, in cases of ordinary nutrition, the things that do the nourishing “are not corrupted in such a way that they disappear altogether, as if they were reduced to nothing” (*ST* 1.77.5). Even so, it must be emphasized that this way of speaking cannot be taken literally. For doing so would imply that Aquinas thinks either (a) that the mere addition (or loss) of matter is sufficient for the existence of new substances (or the destruction of pre-existing ones), or (b) that a substance's acquiring (or losing) matter is not fundamentally different from a new substance coming into existence (or a pre-existing substance passing out of existence). But neither of these things is true.

In the end, therefore, it should be clear that Aquinas's views about change are very complicated indeed. All change (*motus* or *mutatio*) requires the actualization of potentiality, and hence a situation in which something (or better, some hylo-morphic compound) comes to be *from* or passes away *into* another. But such situations can vary significantly, thereby giving rise to changes of very different types. Indeed, in light of the foregoing, we can see that Aquinas is committed to distinguishing at least three main types of change, which for the sake of parallelism we can list as follows:

<sup>6</sup> See, e.g., *ST* 1.119.1 ad 2 and *SCG* 4.81.12.

**Types of Change**

- (1) Transformation
- (2) Transmateriation
- (3) Transubstantiation

What I am here calling *transformation* is just another name for what Aquinas calls *formal change*. It corresponds to the type of change that strictly satisfies Aquinas's general account of change as generation and corruption. As we have seen, moreover, such change can be either substantial or accidental, and either one-one or non-one-one (i.e., many-one, one-many, or many-many).

What I am here calling *transmateriation* is just another name for the type of change to which cases of nourishment and loss of matter belong. As far as I know, Aquinas has no separate name for this type of change. We could refer to it as *change in matter*, but since transubstantiation as well as some transformations (such as the generation of human beings) also involve changes in matter, this might be misleading. As we have seen, transmateriations are always substantial and, though never one-one, always involve either generation or corruption (but not both, except in an extended sense).

Finally, there is *transubstantiation*, which corresponds to the type of change traditionally associated with the Eucharist and also referred to by Aquinas as *conversion*. Unlike changes of the other two types, it always requires special divine intervention, is always one-one, and never involves either generation or corruption. It is, therefore, utterly *sui generis*. Even so, transubstantiation is like transmateriation insofar as it is always substantial and always involves a causal interaction between pre-existing substances (i.e., bread and a body), only one of which survives the causal interaction (i.e., the body).<sup>7</sup>

Before leaving the topic of change altogether, there is one final aspect of Aquinas's views that I want to consider—namely, a certain set of complications associated with his views about accidental forms directly entailed by his understanding of transubstantiation.

### 11.3 Non-Inhering Accidents

On Aquinas's understanding of the Eucharist, the type of change it involves requires not only the conversion of substances, but also accidents that can exist without inhering in any substances. Thus, when some consecrated bread is converted into the body of Christ, Aquinas thinks that the accidents previously inhering in the bread (e.g., its color, shape, and size or dimensions) continue to exist despite the fact that

<sup>7</sup> See §13.4 and §13.6 for discussion of one further type of change to which Aquinas is committed.

they are no longer the accidents *of* any substance. That such accidents continue to exist, Aquinas thinks, is clear to the senses. For after the conversion has occurred, there still appears to be something of exactly the same color, shape, and size as the original bread—say, something white, round, and 2.5cm in diameter. That such accidents continue to exist without inhering in any substance is also clear, Aquinas thinks, though not to the senses, but on reflection. For there is no other substance for such accidents to inhere in. They cannot come to inhere in Christ's body, since it is impossible and in any case does not become white, round, or 2.5cm in diameter. Nor are there any other obvious substances to hand. Aquinas considers the suggestion that such accidents could come to inhere in the surrounding atmosphere. But he rules this out on several grounds, including the general one that accidents are, by nature, "non-transferable":

Accidents are not transferred from subject to subject, so that numerically one and the same accident inheres first in one subject and later in another. For an accident is individuated by its subject. Hence, it is impossible for numerically one and the same accident to inhere in one subject at one time and in another subject at another time. (*ST* 1.77.1)

As this passage makes clear, Aquinas takes the non-transferability of accidents to exclude the possibility of their coming to inhere in *any* new substances. For the same reason, he thinks that if the accidents in the Eucharist are to continue to exist after the conversion of their substance, they must continue to exist apart from any substance whatsoever.<sup>8</sup>

As is also clear from the passage, Aquinas's views about non-transferability are closely connected to his views about individuation. Indeed, as he sees it, accidents are always individuated by the substances in which they *originally* inhere. And this makes it impossible not only for accidents to be "transferred from subject to subject", but also for them to come into existence apart from the substances that individuate them. Even so, Aquinas thinks, once these accidents are already in existence, nothing prevents God from miraculously sustaining them in existence apart from substances.<sup>9</sup>

The possibility of non-inhering accidents has obvious implications for Aquinas's hylomorphism, and in particular for his understanding of the inherence of forms or properties. As noted previously (§1.1, §1.4), Aquinas thinks of inherence as a type of dependency built into the nature of forms or properties. Thus, to say that accidents inhere in substances is just to say that they depend on substances in a certain way. As the foregoing makes clear, however, Aquinas thinks of the dependency in question as guaranteeing their non-transferability. It is not uncommon for contemporary

<sup>8</sup> The question of whether numerically one and the same accident could exist in different subjects, both over time and at the same time, was hotly disputed in the period immediately following Aquinas's death, especially in Paris. For relevant background and discussion, as well as some examples of medieval philosophers who allowed for accidents to be transferred from substance to substance, at least in special circumstances, see Wippel 1981, 221–4.

<sup>9</sup> I discuss Aquinas's views about individuation at greater length in Brower 2012b.

philosophers to speak of the dependency of certain properties (or better, tropes) in terms of their non-transferability. But when they do, they almost always mean to suggest something stronger than what Aquinas has in mind—namely, that the properties in question *essentially depend* on their subject. To illustrate, consider some bread,  $b_1$ , and its individual color or whiteness,  $W_1$ . To say that  $W_1$  is non-transferable in the contemporary sense is to say the following: in all possible worlds in which  $W_1$  exists,  $b_1$  also exists and possesses  $W_1$ . As should be clear, however, Aquinas's understanding of non-transferability is more complicated. Insofar as  $W_1$  is individuated by  $b_1$  it essentially depends on  $b_1$  for its origins and is also essentially such that it cannot be possessed by any other substance. But insofar as God can miraculously sustain  $W_1$  in existence apart from any substance,  $W_1$  does not essentially depend on  $b_1$  for its *continued* existence.<sup>10</sup> Thus, if we want to express Aquinas's understanding of the non-transferability of  $W_1$ , we must say something more like the following: in all possible worlds in which  $W_1$  exists *and God does not miraculously intervene*,  $b_1$  once existed and possessed  $W_1$  and  $b_1$  also continues to exist and to possess  $W_1$ . We can put the point more simply by saying that accidents are *naturally* (rather than *essentially*) *dependent* on substances, for Aquinas, since it would take supernatural intervention (or a miracle) for accidents to exist apart from substances.

So far so good. But it turns out that Aquinas's understanding of the non-transferability of accidents is even more complicated than our discussion so far suggests. Consider again the final sentence of the passage just quoted: "It is impossible for numerically one and the same accident to inhere in one subject at one time and in another subject at another time." Taken at face value, this claim entails not only that accidents cannot be transferred from one substance to another, but also that they cannot come to have any new substratum whatsoever (since 'subject' is more or less synonymous, for Aquinas, with 'substratum'). As it turns out, however, this is not how Aquinas intends the claim to be taken. For immediately after defending it (in the first article of *ST* 3.77), he goes on to argue (in the second article of the same question) that the only accidents that remain in the Eucharist without any substratum whatsoever are quantities (in our example, the size or dimensions of the bread), whereas all the other accidents (in our example, the color and shape of the bread) come to inhere in the quantities:

It is necessary to say that the other accidents that remain in this sacrament inhere, as in a subject, in the dimensive quantities of the bread and wine that remain. One reason for this is the following: it seems clear to the senses that something exists having size and color and which is affected by the other accidents. Nor are the senses deceived in this regard. (*ST* 3.77.2)

<sup>10</sup> In this respect, Aquinas's views about accidents are not unlike Kripke's (1980) views about human beings. Just as Queen Elizabeth depends for her original existence on a particular sperm and egg, but can exist apart from them, so this is also true in the case of accidents and the substances by which they are individuated. Again, see Brower 2012b for further discussion.



This passage is surprising, and not only because it conflicts with the straightforward reading of Aquinas's claims about non-transferability. Up to this point in the *Summa Theologiae*, Aquinas has been at pains to emphasize the impossibility of second-order accidents—that is, accidents that have other accidents as substrata. Indeed, he repeatedly considers this possibility, including the specific case of quantities serving as the substrata for qualities, only to reject it.<sup>11</sup> In fact, in each case he explicitly says that the only sense in which qualities can be said to be accidents of quantities is an extended one: substances cannot have certain qualities (such as color) unless they first have quantities (and hence surfaces).<sup>12</sup>

It is only when we encounter this last passage that it becomes clear that Aquinas's previous denials of second-order accidents have all had an implicit scope restriction. That is to say, accidents having other accidents as substrata is not something that is impossible as such, but only something that is *naturally* impossible (or impossible apart from miraculous divine intervention). Likewise, it is only when we encounter this passage that we realize that even his claims about non-transferability are restricted in scope. When he denies that accidents can be transferred from “subject to subject”, he means to deny only that they can be transferred from “substance to substance”, not from “substrata to substrata”. For, evidently, in the case of qualities such as color, they can be transferred from “substance to accident” or better from “substance to quantity”. Indeed, one of the main points that I think Aquinas intends this whole discussion to emphasize is the following: insofar as God's power makes second-order accidents possible, it also forces us to broaden our notion of subject or substratum to include forms, as well as prime matter and substances.<sup>13</sup>

The possibility of accidents inhering in other accidents, like that of non-inhering accidents more generally, has important implications for Aquinas's hylomorphism. Indeed, it once again complicates his understanding of the type of dependency associated with accidents. As we have seen, all accidents are *naturally dependent* on substances for Aquinas. However, only one type of accident—namely, quantity—is *merely* characterized by such natural dependence. For in addition to such natural dependence on substances, he thinks that all other accidents are also characterized by a sort of essential dependency on substrata of some sort or other. Thus, not even God could miraculously sustain the color or shape of some bread in existence apart from its dimensions. It is, in fact, precisely for this reason that Aquinas insists, in the same context, that all other accidents are individuated not only by the

<sup>11</sup> See, e.g., Aquinas's replies to each of the following objections: *ST* 1.77.7 obj. 2; *ST* 1–2.7.1 obj. 2 and 3; *ST* 1–2.50.2 obj. 2; and *ST* 1–2.56.1 obj. 3. Compare also Aquinas's reply to *ST* 3.77.2 obj. 1, and his discussion in *QDV* 3.

<sup>12</sup> See again Aquinas's replies to the objections mentioned in the previous note. See also *In BDT* 5.3.189–202, where Aquinas discusses the order in which various accidents inhere in a substance.

<sup>13</sup> Although Aquinas's chief motivation for allowing the possibility of both non-inhering and second-order accidents is theological in nature, he does think there are some independent philosophical reasons for accepting at least the first possibility. See Klima 1997b and §13.4, this volume.

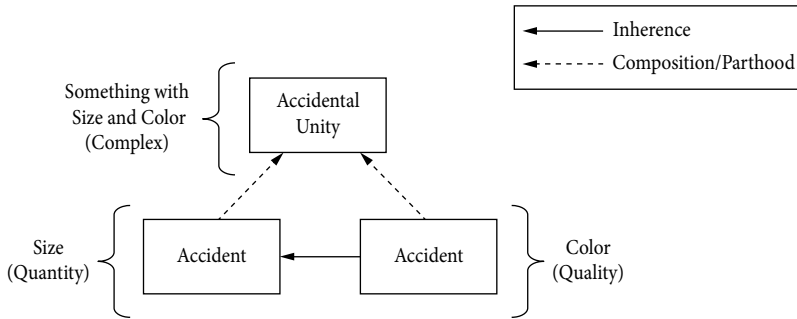


Figure 11.5 A New Type of Accidental Unity

substance in which they originally inhere, but also by the quantities or dimensions of that substance. For in order to be the color or shape of some substance, an accident must be the color or shape of some substance with specific (indeed, maximally determinate) dimensions.<sup>14</sup>

In addition to complicating Aquinas's understanding of the dependency of accidents, the inherence of accidents in other accidents also complicates his understanding of hylomorphic compounds. Indeed, the possibility of the latter requires the introduction of a type of hylomorphic compound (or complex) that we have yet to consider—one in which accidents serve as both matter and form (or substratum and property). For the sake of contrast with other types of compound, we can represent this one using the diagram at Fig. 11.5.

Although I have referred to the type of compound (or complex) represented by this diagram as an *accidental unity*, it is obviously different from all other accidental unities that we have considered. For in the case of all other such unities, which are naturally occurring, what serves as their matter or substratum is a substance. Insofar as this new type of compound includes only forms or properties, it is not unlike the sort of complex envisioned by contemporary bundle theorists.<sup>15</sup>

There is one further complication that all of this raises for Aquinas that I want to mention here—this one having to do with his understanding of material objects. As we have seen (§10.2), to be a material object, for Aquinas, is to be an object possessing prime matter, where the mark of materiality is spatial extension. This understanding of material objects suggests that only material objects are extended. But, in fact, as we can now see, this is not the case. In the Eucharist, we get a type of extended object—something “having size and color and affected by the other accidents”—which

<sup>14</sup> At one place, Aquinas does allow that there is a sense in which God could *create* a color or shape without any size or dimensions, but because it would lack individuation, he says it would be more like a Platonic form or universal than an individual property or accident. See *Quod.* 7.4.3.

<sup>15</sup> Although bundle theorists don't typically think of properties inhering in (or serving a substrata for) other properties, but rather think of all the properties associated with a substance as being compresent with one another. But see Simons 1994 for some variations on the standard form of bundle theory.

nonetheless lacks any prime matter.<sup>16</sup> There is still a sense in which such an object might be described as material—namely, material in its origins—since it cannot come into existence apart from any matter. For insofar as the quantities associated with this object are themselves individuated by material substances, in any world in which they exist, it will be true that a substance composed of matter existed and possessed the quantities in question. Even so, Aquinas thinks that the proper understanding of the Eucharist requires not only that God can miraculously sustain accidents in existence apart from substances and some of them (namely, quantities) apart from any substrata whatsoever, but also that he can miraculously sustain certain extended objects in existence apart from any prime matter. Indeed, I think that what all of this shows is that the real source of spatial extension, for Aquinas, is quantity, and hence that quantities are the only type of being that are extended in and of themselves. Prime matter, by contrast, is extended only derivatively or by virtue of possessing quantity (or better, by being a proper part of a substance that possesses quantity).

There is much more that could be said about Aquinas's understanding of the Eucharist, and the implications that it has for his views about accidental forms, compounds, and individuation. But rather than pursue these issues any further, I want to set them aside in order to focus on one final set of complications associated with Aquinas's views about forms—namely, the substantial forms (or souls) of human beings.

## 11.4 The Subsistence of the Human Soul

In the context of the Eucharist, Aquinas commits himself to the view that certain accidental forms (namely, quantities) can exist apart from any substrata with special divine assistance. For reasons I will now explain, in the context of discussing human souls, Aquinas also commits himself to the view that certain substantial forms can exist apart from any substrata even without any special divine assistance.

As we have seen (§9.2), Aquinas describes human beings as rational animals, where 'animals' is shorthand for a certain type of animate corporeal substance. Like all other corporeal substances or bodies, human beings possess both prime matter and substantial form. And like all other animate substances (or organisms), they possess a soul—that is, a substantial form that bestows on them the characteristic capacities or causal powers associated with life. Unlike all other material substances and organisms, however, Aquinas thinks that human beings possess a rational soul—that is, a very special type of substantial form, one that bestows on them the distinctive capacities or causal powers associated with rational thought and volition. What is more, it is precisely because the human soul is the ultimate source or ground for such distinctive capacities that Aquinas thinks it must be regarded as subsistent—that is, as capable, by nature, of existing apart from any matter or substrata.

<sup>16</sup> Indeed, Aquinas thinks this object can (in virtue of the same miracle by which it is sustained in existence) perform many of the functions associated with the original substance, such as nourishing the human body. See, e.g., *ST* 3.77.6.

Aquinas argues for the subsistence of the human soul in different ways at different places in his work. But his best-known argument occurs in the *Summa Theologiae* and proceeds in two stages. In the first stage, Aquinas attempts to establish the immateriality (or incorporeality) of the human soul. In the second stage, he attempts to derive the subsistence of the soul from its immateriality. In order to secure the first stage of his argument, Aquinas appeals to certain facts about the scope of rational thought or cognition, which he thinks the nature of the human soul itself makes possible:

It is clear that a human being is capable of cognizing the natures of all bodies through the intellect [or rational soul]. But that which is capable of cognizing something must be such that it lacks any of those things in its own nature, since what exists in it by nature would in that case impede the cognition of those other things . . . Hence, if the source of intellectual cognition had within it the nature of any body, it would be incapable of cognizing all bodies . . . Hence, it is impossible that this intellectual principle should be a body. Likewise, it is impossible that intellectual cognition should occur through a bodily organ. (*ST* 1.75.2)

Although the precise details of this stage of the argument are notoriously obscure, the overall point that Aquinas is attempting to establish is clear—namely, that the exercise of certain powers or capacities associated with the human soul does not require a body or any bodily organ. It is in this sense, Aquinas thinks, that the soul must be regarded as immaterial. And such immateriality, he thinks, is all that is required to secure the second stage of his argument:

Hence, the source of intellectual cognition, which is called the mind or the intellect, is by itself the source of an activity in which the body has no share. But nothing can be the source of an activity in this way unless it subsists on its own (*nihil potest per se operari nisi quod per se subsistit*) . . . It follows, therefore, that the human soul, which is called the intellect or mind, is something incorporeal and subsistent. (*ST* 1.75.2)

Once again, the overall point Aquinas is trying to make is clear, even if the details are not—namely, that insofar as the human soul is the source of a power that can be exercised in the absence of a body, it must itself be capable of existing apart from the body. It is in this sense, Aquinas thinks, that the soul is subsistent.

Aquinas takes this two-stage argument to provide a philosophical basis for a conclusion that he is committed to on purely theological grounds—namely, the immortality of the soul.<sup>17</sup> But rather than spend any time evaluating this argument, I want to focus instead on a few of the complications that it raises for his hylomorphism—namely, his views about inherence, forms, and substances.

Aquinas often speaks as if all forms were properties—indeed as if anything that inheres in some matter or substratum were a property. But as we can now see, this isn't true. For although the human soul is a form, and hence inheres in prime matter, it is not a property. For no property could support rational thought and volition in

<sup>17</sup> See *ST* 1.75.6, where he uses this argument to defend the incorruptibility of the soul.

the absence of the body, much less subsist in the way that human souls are supposed to for Aquinas. Indeed, it is precisely because the human soul is subsistent, or capable by nature of existing independently of any matter or substratum, that it differs from all other forms or inherent beings. For in the case of all other such beings, it takes a miracle for them to exist apart from any substratum. And even a miracle isn't enough to guarantee that all of them can exist in this way.

By contrast, the subsistence of the human soul—that is, its intrinsic capacity to exist on its own—not only shows that it is not a property, for Aquinas, but also that it is a substance in a fairly robust sense. For purely etymological reasons, Aquinas is willing to allow that anything that subsists in anyway whatsoever can be called a substance in a broad sense.<sup>18</sup> The human soul obviously qualifies as a substance in this sense. But so do prime matter and accidental unities. Indeed, I think that it is precisely because both prime matter and the human soul qualify as substances in this broad sense that Aquinas often speaks of human beings as being composed of both a corporeal and incorporeal substance—or a body and a soul.<sup>19</sup> Commentators often express puzzlement over Aquinas's willingness to speak of human beings in this way, and in particular as being composed of a corporeal substance.<sup>20</sup> But this way of speaking is part and parcel of the intellectual and religious traditions to which Aquinas belongs. (The Chalcedonian formula, for example, appears to require talk of human beings as composed of a corporeal substance or body.) And provided we keep in mind his broad sense of 'substance', and the fact that prime matter is itself both corporeal and subsistent, his speaking in this way makes perfect sense.

But Aquinas often uses the term 'substance' in a narrower or more robust sense to refer to any individual in the Aristotelian category of substance—what he sometimes follows Aristotle in referring to as a 'this something' (*hoc aliquid*). The human soul is also a substance in this sense, but prime matter and accidental unities are not. For although prime matter can be said to belong to the Aristotelian category of substance in an extended sense, it is not an individual (or a *this*).<sup>21</sup> And although accidental unities are individuals—indeed, subsisting individuals or particulars—they cannot be said to belong to the Aristotelian category of substance, even in an extended sense. By contrast, the human soul is not only a subsistent individual or particular, but also something that can be said to belong to the Aristotelian category of substance, at least in an extended sense (more on the precise sense shortly). For the same reason, the human soul differs from all other mere subsistents or substances in the broad sense. It is also a substance in the sense of a *this something*.

Aquinas's commitment to saying that not all forms are properties, and indeed that substances (in the sense just described) can inhere, is often taken as a sign of the

<sup>18</sup> See again the discussion in §1.5 and the entry on 'substance' in the Appendix.

<sup>19</sup> See, e.g., *ST* 1.75 *divisio textus* and *passim*. See also the passage from *DEE* 2 cited in §9.1.

<sup>20</sup> The *locus classicus* for such puzzlement is van Steenberghe 1980.

<sup>21</sup> See again §2.4 (esp. n. 42) for some discussion of the sense in which prime matter can be said to belong to the category of substance.

incoherence of his views. How can something other than a property qualify as a form or reasonably be said to inhere? And would Aquinas ever have said such a thing if it were not for his prior commitment to the doctrine of the immortality of the human soul?

The objection itself, however, betrays a failure to appreciate the context in which Aquinas develops his views. As we have seen (§3.3), Aquinas's hylomorphism is to be understood, first and foremost, in broadly functional terms—and this for purely independent reasons, having to do with the nature of change. Thus, a form is something that can combine with matter in such a way as to confer certain characteristics or capacities on the complex of which it is a part. But there is nothing to prevent the human soul, conceived of as a substance or particular, from combining with some matter in this way. True, Aquinas thinks that such combining must ultimately be understood in terms of inherence. But inherence itself is to be understood in broadly functional terms (§3.5)—namely, as a type of relation that both holds between the constituents of some complex and makes possible the relevant conferral of characteristics or capacities. Given this functional understanding, however, there is nothing to prevent a substance or particular from bearing this sort of relation to prime matter. Indeed, I suspect that those who regard Aquinas's views as incoherent simply have a different relation in mind when they think of inherence. That is to say, they are not thinking of a relation that is to be understood functionally, but are instead thinking of a relation that is, perhaps, the converse of exemplification (and so mistakenly supposing that, since only properties can be exemplified, only properties can inhere).

It is worth noting, however, that even on Aquinas's more substantive or meta-physical understanding of inherence, according to which it is a special type of dependency that properties bear to their substrata, there is nothing to prevent substances or particulars from bearing this same relation to prime matter. For such dependency, as we have seen (§11.3), is ultimately to be conceived of in terms of essentiality of origins. As Aquinas sees it, to say that forms are individuated by the substrata in which they inhere is, in the first place, just to say that forms cannot initially come into existence apart from such substrata. But on the standard analogue for such dependency in contemporary philosophy, its relata are both substances—namely, a human being (such as Queen Elizabeth) that depends for its initial existence on some particular sperm and egg.

Finally, it must not be forgotten that Aquinas takes himself to have good philosophical reasons, grounded in the nature of rational thought or cognition, for insisting on the subsistence of the human soul. It is not, therefore, a mere ad hoc addition to his account. Indeed, Aquinas thinks the philosophical reasons in question are hinted at by Aristotle's own treatment of the human soul in *De Anima* 3. Whether he's right about that, or whether he would have been motivated to develop these suggestions in the way he does independently of his theological commitments, seems to me of little relevance. The important point is that Aquinas has principled grounds

for insisting on the subsistence of the human soul, despite its being a form, and there is nothing in his broader hylomorphism that prevents him from doing so.

## 11.5 Inherence, Subsistence, and Ontology Revisited

Before concluding, I want to examine one further implication of Aquinas's commitment to the subsistence of the human soul—namely, a fairly radical modification it requires to his understanding of the main ontological types in terms of which the material world is to be understood.

Aquinas often speaks as if inherence and subsistence were contradictory notions, so that all beings either inhere or subsist but not both. Indeed, this way of speaking provides the basis for the fourfold division of ontological types discussed in Chapter 10 (§10.1):

### Fourfold Division of Being

- (1) Prime Matter
- (2) Form
- (3) Substance
- (4) Accidental Unity

In line with this division, Aquinas often speaks as if forms or properties are what we might call *mere inhere*nts—that is, beings that inhere but do not subsist—whereas all other types of being are, by contrast, *mere subsist*ents—that is, beings that subsist, but do not inhere. What is more, he also habitually speaks as if substance were the only type of mere subsistent that is both (a) individual (and hence particular) and (b) such that it is not composed of other subsistent individuals (and hence a basic particular). In short, Aquinas often speaks in ways that would suggest that the relationship between inherence, subsistence, and the members of his fourfold division of being could be understood in terms of the following overly simplistic model:

### Inherence, Subsistence, and Ontological Types—Simple Model

- (1) *Mere Inhere*nts = beings that inhere but do not subsist.
  - (a) *Form* = properties.
- (2) *Mere Subsist*ents = beings that subsist, but do not inhere.
  - (a) *Prime matter* = a type of being that subsists, but is not individual (i.e., non-individual stuff).
  - (b) *Substance* = a type of being that subsists and is individual but not composed of other subsistent individuals (i.e., basic particulars).
  - (c) *Accidental unity* = a type of being that subsists, is individual, and is composed of other subsistent individuals (i.e., non-basic particulars).

As should by now be clear, however, things are much more complicated than this simple model would suggest. In order to accommodate subsistent human souls, Aquinas must also make room in his ontology for what we might call *mixed subsistents*—that is, a class of beings that can both subsist and inhere. But this in turn complicates his understanding of substance, requiring it to span the class of mere subsistents and mixed subsistents. For subsistent human souls are clearly basic particulars. For unlike prime matter, they are individual (and hence particular). And unlike accidental unities, they are not composed of other subsistent individuals (and hence basic particulars).

The fact that subsistent human souls qualify as basic particulars, and hence as substances in a narrow or robust sense of the term, raises some further complications. Aquinas is committed to upholding the Aristotelian doctrine that no substance can be composed of other substances. Indeed, his commitment on this score is, in large part, what lies behind his conception of prime matter as pure potentiality, or non-individual stuff. For if prime matter were individual, it would qualify as a substance in the sense of a basic particular, and hence all things composed of it would be accidental unities.<sup>22</sup> But note that we now seem to face a similar difficulty with regard to subsistent human souls. Insofar as they qualify as substances in the sense of a basic particular, it would appear that there can be no substances composed of them.

Aquinas is, of course, aware of this difficulty. Indeed, in the context of his discussion of the subsistence of the human soul in the *Summa Theologiae*, it forms the basis of the very first objection that he considers to his view:

It seems that the human soul is not something subsistent. For what is subsistent is called a this something (*hoc aliquid*). It is not the soul, however, but [only] the compound of body and soul that qualifies as a this something. Hence, the soul is not something subsistent. (*ST* 1.75.2 obj. 1)

As we have seen, Aquinas associates the notion of a basic particular (or substance in what I have been calling the narrow or robust sense) with the notion of a this something (*hoc aliquid*)—that is, an individual in the Aristotelian category of substance. Here Aquinas imagines an objector denying that the human soul is a substance in this sense precisely because it would entail that the whole human being, which is properly said to fall under the category substance, is itself composed of something falling under this same category.

In response, Aquinas draws a sharp distinction between two different types of basic particular or individual substance (*hoc aliquid*):

The term 'substance' (*hoc aliquid*) can be used in two senses. In the first sense, it refers to any subsistent thing, whereas in the second sense it refers to a subsistent thing that is complete in

<sup>22</sup> The claim that prime matter must get its being or actuality from the forms that inhere in it is a constant refrain in Aquinas's writings. Otherwise, he suggests, the forms that inhere in it would have to be regarded as accidental. See, e.g., the passage from *DEE* 6 discussed in §1.5, as well as the numerous passages cited in Wippel 2000, 327, n. 124.



the nature of some species. The first sense excludes inherence of the sort associated with an accident or material form; the second sense excludes in addition the incompleteness associated with being a part. Hence a hand could be called a substance in the first sense, but not in the second. (*ST* 1.75.2 ad 1)

The distinction that Aquinas is drawing here is one that he thinks is required by Aristotle's own views about the category of substance. For Aristotle often speaks as if individual body parts (e.g., individual hands and heads, arms and legs) are to be included among the members of this category—and this despite the fact that he never identifies substantial species and genera containing such parts. On the contrary, whenever Aristotle identifies substantial species and genera, he always does so using the names for the wholes of which they are a proper part (e.g., human beings or animals). As Aquinas sees it, this warrants a distinction between two different types of basic particular or individual substance. On the one hand, there are those that are “complete” in some species of substance. That is to say, there are basic particulars, such as Socrates, that fall under some natural kind. Let us call basic particulars of this sort, *complete substances*. On the other hand, there are those that are not “complete” in this way. That is to say, there are basic particulars, such as Socrates's head and hands, that do not themselves fall under any natural kind, but rather are proper parts of things that do. Let us call basic particulars of this sort, *incomplete substances*.

The relevance of all this for Aquinas's views about the human soul is perhaps obvious. Although the human soul is a basic particular, and hence an individual substance in one sense, it must still be thought of as an incomplete substance, insofar as it is a proper part (or constituent) of a complete human being. But just as there can be no objection to saying that a human being is composed of its various bodily parts, so, too, Aquinas thinks there can be no objection to saying that a substance is composed of a subsistent soul. Indeed, as Aquinas sees it, when Aristotle says that no substance can be composed of another substance, this should be understood as a claim that applies only to complete substances.<sup>23</sup>

We can now see how our simple model of the relationship between inherence, subsistence, and ontological types must be revised if we are to capture Aquinas's more complete understanding of the world. We can continue to think of forms or properties in terms of mere inhereents, provided we are thinking of forms in the substantive or metaphysical sense. But in order to accommodate the human soul,

<sup>23</sup> The comparison of bodily parts with human souls in this context, and in particular Aquinas's characterization of both as *incomplete substances*, certainly encourages a more robust understanding of bodily parts than my preferred deflationary interpretation would suggest. It is important to emphasize, however, that in other contexts Aquinas refers to bodily parts, but never to human souls, as *potential parts*, which suggests that not all incomplete substances are to be included in his fundamental ontology. Moreover, a robust understanding of bodily parts, but not the soul, would require us to conceive of the former ashylomorphic compounds, which seems inconsistent with Aquinas's commitment to the doctrine of the unicity of substantial forms. See again the discussion in §1.2.

which is a form in a merely functional sense, as well as the different types of substance that it leads Aquinas to distinguish, we must broaden the class of subsistents to include mixed as well as mere subsistents. In that case, we can state the revised model as follows:

#### **Inherence, Subsistence, and Ontological Types—Revised Model**

- (1) *Mere Inherents* = beings that inhere but do not subsist.
  - (a) *Form* = properties.
- (2) *Subsistents* = beings that subsist, but may or may not inhere.
  - (a) *Prime matter* = a type of being that subsists, but is not individual (i.e., non-individual stuff).
  - (b) *Substance* = a type of being that subsists and is individual but not composed of other subsistent individuals (i.e., basic particulars).
    - (i) *Complete substance* = basic particulars falling under some natural kind.
    - (ii) *Incomplete substance* = basic particulars that are part of something falling under a natural kind.
  - (c) *Accidental unity* = a type of being that subsists, is individual, and is composed of other subsistent individuals (i.e., non-basic particulars).

The human soul, of course, falls under *incomplete substance* in this revised model, which is the type of being that includes mixed subsistents. In principle, this class could be said to include ordinary body parts as well. But for reasons I cannot go into here, I don't think Aquinas's fundamental ontology includes such parts (though it does include subportions of prime matter arranged body-part-wise, and so does license talk of such parts).<sup>24</sup> If I am right about this, then *incomplete substance* is a type of being exhausted by subsistent human souls. Given how radically different the members of this type are from the members of the other types—all of which are either mere inhereents or mere subsistents—I think that the human soul, for Aquinas, is best conceived of as a *sui generis* type of being. That is to say, I think his fourfold division of ontological types could better be expressed in terms of a fivefold division:

#### **Fivefold Division of Being**

- (1) Prime Matter
- (2) Form
- (3) Human Soul
- (4) Substance
- (5) Accidental Unity

<sup>24</sup> See again the previous note and the discussion in §1.2 for further details.

As this fivefold division of Aquinas's ontological types serves to emphasize, the human soul stands midway between forms (or properties) and substances (in a stricter and more proper sense). Like properties, the human soul is characterized by inherence or the type of dependency that properties bear to their substrata, and hence can be called a form in the functional sense. But unlike properties, or forms in the substantive or metaphysical sense, the human soul is by nature capable of existing on its own. In this respect, it is like (complete) substances. Unlike the latter, however, the human soul does not naturally occur on its own. On the contrary, it naturally occurs only as part of a larger whole—a complete human being—even if it can exist apart from such a whole. In this respect, it is more like an ordinary body part, such as a head or hand, which can (at least in some sense) exist by nature on its own, even if this is not its natural state of being. In short, insofar as the human soul alone is capable of both subsisting and inhering, it would seem to be characterized by a distinctive mode of being—one we might refer to as that of *mixed subsistence*.<sup>25</sup>

Finally, as this fivefold division of being helps to emphasize, human beings turn out to be a very special sort of compound or material substance, for Aquinas. For unlike all other material substances, human beings are not compounds of prime matter and properties. On the contrary, they are compounds of prime matter and a *sui generis* type of particular that qualifies as a form only in the purely functional sense. Since such a particular clearly qualifies as a substance in some sense, and Aquinas thinks of it as an immaterial (or incorporeal) being, questions can be raised about the extent to which human beings really qualify as *material* substances for him. But since these questions raise a host of further complications, which are best treated in connection with Aquinas's views in philosophy of mind, I will address them separately, in the next chapter of this book.

<sup>25</sup> As all of this helps to show, I think Aquinas is ultimately committed to distinguishing fifteen (rather than fourteen) absolutely fundamental ontological types. (See again §2.4 and §10.1 for a list of the fourteen fundamental types to which Aquinas's fourfold division gives rise.)

# 12

## Mind–Body Dualism

Near the end of Chapter 11 (§§11.4–5), I explained how Aquinas’s views about the special nature of the human soul complicate his conception of forms and their place within his broader hylomorphism. In the remaining two chapters (Chs 12–13), I examine a host of further complications introduced by these same views. In the present chapter, I explain how Aquinas’s account of the human soul’s relation to the body complicates his conception of human beings and their place within his ontology as a whole. In particular, I argue that this account forces Aquinas to introduce some important refinements to his understanding of both substances in general and the specific type of material substance (or body) to which human beings are identical.

Aquinas’s account of the soul–body relationship, especially in the case of human beings, has received a great deal of attention in the secondary literature, in no small part because it is widely supposed to present us with a distinctive type of position in the philosophy of mind.<sup>1</sup> Indeed, many commentators are convinced that Aquinas’s account stands midway between the familiar positions of materialism and substance dualism, combining the benefits of each while avoiding the excesses of either. Consider, for example, the following remarks by Gyula Klima:

For philosophers who find both a dualistic and a purely materialistic account of the human soul unacceptable, the Aristotelian-Thomistic conception of the soul as the substantial form of the living body may appear to be an intriguing alternative... despite possible appearances to the contrary, Aquinas’s conception does indeed offer a viable alternative to the modern dilemma of dualism vs. materialism. (Klima 1997a, 257)<sup>2</sup>

Needless to say, many contemporary philosophers—including many non-historians in the analytic tradition—remain skeptical of such claims, in no small part because they fail to see any coherent middle ground to be occupied between these familiar positions. Some, such as Bernard Williams, go so far as to suggest that the alleged promise of any form of hylomorphism in philosophy of mind is more specious than genuine:

<sup>1</sup> See, e.g., Klima 1997a, Leftow 2001, Pasnau 2002, and Stump 1995.

<sup>2</sup> Compare also the final sentence of the article in question:

But then, if we really understand how these claims [about the soul and body] fit together, we can clearly see that Saint Thomas’s conception does indeed manage to steer its way safely between the Scylla of dualism and the Charybdis of materialism. (Klima 1997a, 270)

Hylomorphism earns its reputation as everybody's moderate metaphysics of mind, I believe, by in fact wobbling between [these] two options. In one of them, *soul* does basically appear only adjectivally, and while the doctrine is, so far as I can see, formally consistent, it is only a polite form of materialism, which is cumbersome, misleading, and disposed to point in the wrong direction from the point of view of deeper theoretical understanding. It also has precisely this disadvantage of readily sliding in the other view, in which *soul* tries to transcend its adjectival status, and become the bearer of personal properties. (Williams 1986, 197; see also Barnes 2003)

There is something to be said for both sides of this dispute. Aquinas's commentators are wrong, I believe, to characterize his position as standing midway between materialism and substance dualism. But philosophers such as Williams are equally wrong to suppose that Aquinas must therefore lack a distinctive position in philosophy of mind. In what follows, I shall attempt to demonstrate that Aquinas's hylomorphism does, indeed, present us with a *sui generis* type of position, one whose virtues have yet to be fully appreciated in the context of contemporary debates. Even so, I shall argue that to appreciate the full significance of his position, we must consider its relationship not only to materialism and substance dualism, but also to a further position that has tended to be overlooked by all parties to the dispute—namely, trialism. (More on this further position shortly.)

My argument for these claims will be systematic in nature. That is say, rather than engaging specific debates in the secondary literature or in detailed exegesis of primary texts, I will instead rely on the results of previous chapters to establish my preferred interpretation of Aquinas. Indeed, for reasons that will emerge, once we have a clear understanding of the three positions just mentioned—materialism, substance dualism, and trialism—the proper interpretation of Aquinas will more or less fall out of what I have already shown. After completing my argument for these claims, I will return to the complications that Aquinas's views raise for the nature of substances in general and material substances in particular.

## 12.1 Two Familiar Conceptions of Human Beings

Traditional debates about the nature of human beings tend to cluster around three types of interrelated questions:

### Questions about Human Beings

- (1) *Minds and bodies*: What is the nature of human minds (or souls) and bodies? And how are they related, both to each other and to human beings?
- (2) *Human nature*: What is the nature of human beings themselves? Are they fundamentally material beings, immaterial beings, or some combination of both?
- (3) *Death and afterlife*: What happens to human beings at death? Evidently, they cease to be alive, but does this entail that they cease to exist altogether?

Questions of the first two types are the most important for distinguishing different conceptions of human beings. Hence, they will be my focus in this chapter. Questions of the third type raise a host of complications that I shall put off discussing until the next chapter. Even so, we shall see that it is not possible to prescind here from such complications altogether.

In response to questions of the first two types, it is customary to distinguish two main positions in philosophy of mind—namely, *materialism* and *substance dualism*. Let us briefly consider each of these positions, focusing on specific versions that anticipate central features of Aquinas's own views.

According to materialism, human beings are wholly material objects. Such objects can obviously have material parts (cells, tissues, organs, etc.) and physical properties (mass, extension, etc.). And perhaps they can even be said to have certain types of non-physical property (functional properties, qualia, etc.). Even so, they cannot be said to have any immaterial objects as parts, and certainly no immaterial minds or souls.

Materialists disagree among themselves about the precise nature of the objects to which human beings are identical. Some identify human beings with their bodies—that is, with living, breathing organisms.<sup>3</sup> Others identify human beings with proper parts of such organisms—such as the brain, or the cerebrum, or the smallest part of an organism that can support thought.<sup>4</sup> Yet others identify human beings with objects distinct from but co-located with human bodies or organisms.<sup>5</sup> And, of course, there are variations on these views, as well as disagreements about the nature of objects in general (bundle theory, bare particularism, temporal-parts theory, etc.).<sup>6</sup>

Contemporary materialists tend to avoid all talk of the soul, and to be more interested in mental states than minds. Some go so far as to insist that human beings lack both minds and mental states. This is the view of the eliminative materialists.<sup>7</sup> Others allow that human beings can be said to have both minds and mental states, provided they are either reducible to or realized by wholly material objects and their physical properties. This is the view of reductive and non-reductive materialists, respectively.<sup>8</sup> And some materialists even allow that human beings can be said to have mental states that are neither reducible to nor realized by physical properties, but instead comprise a basic type of non-physical property. This is the view of the property dualists.<sup>9</sup>

In what follows, it will be useful to focus on a version of materialism that identifies human beings with their bodies, human minds with the brain, and human mental states with properties of the brain, leaving open the question of whether such states are reducible to or realized by physical properties. Indeed, for our purposes, it will be useful to think of materialism as the conjunction of five claims:

<sup>3</sup> E.g., Merricks 2001, Olson 1997, and van Inwagen 1990.

<sup>4</sup> See Hershenov 2005 and Olson 2007 for discussion of this sort of view.

<sup>5</sup> E.g., Baker 2000.

<sup>6</sup> See, e.g., Hudson 2001 for the view that human beings are temporal parts of brains.

<sup>7</sup> E.g., Churchland 1981.

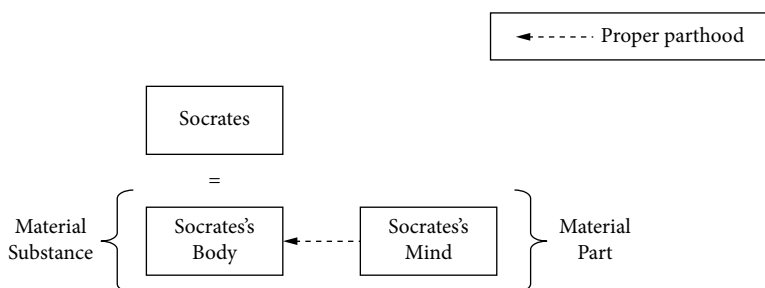
<sup>8</sup> E.g., Lewis 1994 and Putnam 1975.

<sup>9</sup> E.g., Merricks 2007.

**Materialism**

- (M1) There is exactly one type of substance required to account for the nature of human beings—namely, wholly material substances.
- (M2) Human bodies are identical to wholly material substances.
- (M3) Human minds are material parts of human bodies (namely, brains).
- (M4) Human beings are identical to bodies that possess minds as proper parts.
- (M5) Human beings are, by nature, wholly material beings.

For the sake of future reference, let us illustrate this conception for the particular case of Socrates (Fig. 12.1).



**Figure 12.1** Materialism

Materialism has considerable appeal as a conception of human beings. As the specific version that I'm focusing on helps to make clear, it can uphold the obvious unity that exists between human minds and bodies (by identifying the former with a proper part of the latter); it can preserve our pre-theoretical conception of ourselves as material substances of a certain type (by identifying us with living bodies or organisms); and it can preserve our common-sense intuitions about the goodness of the human body and the badness of human death (by taking for granted both the value of human beings and the destruction of a living body at death). What is more, materialism can accomplish all this with a significant amount of theoretical parsimony (by invoking a single type of substance to account for the nature of human beings—indeed, a type that we appear to be committed to invoking anyway).

Along all these parameters, therefore, materialism clearly has a lot going for it. But it is worth noting that materialism also has considerable appeal when it comes to upholding certain theological commitments—commitments that shape Aquinas's own conception of human beings. Christian scripture and tradition place significant emphasis on the materiality of human beings. There are, for example, biblical passages such as Genesis 3.19—"For dust you are, and to dust you shall return"—that strongly suggest the identification of human beings with material substances or

bodies.<sup>10</sup> There are also particular Christian doctrines, such as the resurrection of the body and the Incarnation of Christ, which emphasize the goodness of the human body and the badness of human death.<sup>11</sup> In light of these sorts of consideration, it is not perhaps surprising that a number of prominent Christian philosophers and theologians embrace a form of materialism about human beings.<sup>12</sup>

As is well known, however, there are other theological commitments, also upheld by Christian scripture and tradition and equally important to Aquinas, that appear to be inconsistent with materialism. Thus, in addition to passages such as that just quoted from Genesis, there are passages such as Ecclesiastes 12.7—“The dust returns to the ground it came from, and the spirit returns to God who gave it”—that strongly suggest that human beings possess an immaterial soul capable of existing apart from their body.<sup>13</sup> And there are doctrines such as the *imago Dei*—according to which human beings are distinct from all non-human animals in virtue of being created in God’s image—that also appear to be incompatible with materialism. For if God is wholly immaterial, and human beings bear his image, there is some pressure to regard human beings as at least partly immaterial. No doubt, it is considerations such as these that help to explain why materialism has always been a minority position among Christians. Indeed, it helps to explain why many prominent Christian philosophers and theologians continue to insist that materialism should be rejected in favor of its chief competitor—namely, substance dualism.<sup>14</sup>

Substance dualists have no objection to identifying human bodies with wholly material substances. On the contrary, what they object to is the identification of human minds (or souls) with material beings of any sort (including the brain). As their name suggests, substance dualists insist that we must invoke two fundamentally different types of substance to account for the nature of human beings—namely, wholly material substances in the case of their bodies and wholly immaterial substances in the case of their minds. What is more, substance dualists standardly identify human beings themselves with their minds (or souls) and, on the simplest and most familiar versions of their view, take the connection between human minds and bodies to consist in their standing in appropriate causal relations.<sup>15</sup> In order to

<sup>10</sup> This passage from Genesis, along with the one from Ecclesiastes that follows, are both cited in Stump 1995.

<sup>11</sup> I will have more to say about each of these doctrines in Chapter 13.

<sup>12</sup> E.g., Baker 1995; Hudson 2001, 172–8; Merricks 2007; van Inwagen 1995.

<sup>13</sup> See again §§11.4–5 for discussion of Aquinas’s commitment to the immortality of the soul.

<sup>14</sup> E.g., Plantinga 2006, Swinburne 1986, and Zimmerman 2006.

<sup>15</sup> This understanding of substance dualism, often associated with Plato and Descartes, is explicit in the work of Richard Swinburne:

A person has a body if there is a chunk of matter through which he makes a difference to the material world, and through which he acquires true beliefs about that world. Those persons who are men have bodies because stimuli landing on their eyes or ears give them true beliefs about the world, which they would not otherwise have; and they make differences to the world by moving arms and legs, lips and fingers. Our bodies are the vehicles of our knowledge and operation. The ‘linking’ of body and soul consists in there being a body which is related to the soul in this way. (Swinburne 1986, 146)



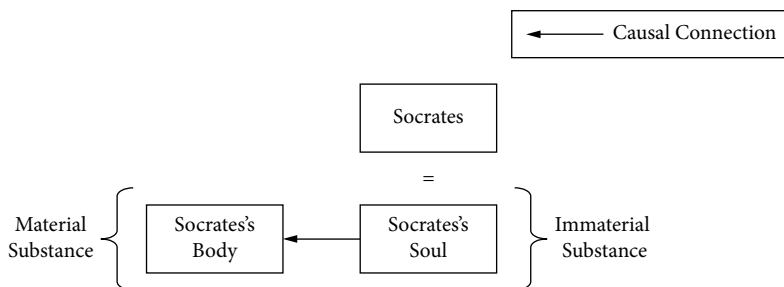


Figure 12.2 Substance Dualism

bring out the contrast with materialism, we can think of substance dualism as a conjunction of five claims that parallel those at (M1)–(M5):

#### Substance Dualism

- (D1) There are exactly two types of substance required to account for the nature of human beings—namely, wholly material substances and wholly immaterial substances.
- (D2) Human bodies are identical to wholly material substances.
- (D3) Human minds (or souls) are identical to wholly immaterial substances.
- (D4) Human beings are identical to minds (or souls) that possess bodies by being causally connected to them.
- (D5) Human beings are, by nature, wholly immaterial beings.

And, once again, we can illustrate this conception of human beings for the particular case of Socrates (Fig. 12.2).

For reasons already mentioned, substance dualism is not without its attractions as a conception of human beings. In fact, among those committed to the immortality of the soul, or the immateriality of human beings more generally, it is often treated as the only real alternative to materialism.

Even so, it cannot be denied that substance dualism brings with it some significant costs of its own. Indeed, it appears to fall short along precisely those parameters where materialism succeeds. By comparison with materialism, substance dualism is theoretically unparsimonious (insofar as it invokes two types of substance, where materialism invokes only one—and the further type it invokes is not one that we are obviously committed to anyway); it violates our common-sense conception of human beings as living bodies or organisms (insofar as it identifies us with wholly immaterial substances); and, finally, it threatens to undermine the unity of human minds and bodies (insofar as it takes the connection between them to consist in causal connection), as well as to minimize the goodness of the human body and the

badness of human death (insofar as it denies that death destroys human beings or anything essentially connected to them).

Reflection on such costs might well make one reconsider whether substance dualism is ultimately any better off than materialism, even along the parameters we've been considering. Indeed, such reflection might make one wish there were another conception of human beings that could somehow combine the strengths of both positions, while at the same time avoiding their specific weaknesses.

## 12.2 A Third Conception of Human Beings

In Aquinas's day, it was standard to associate materialism with the ancient naturalists, such as Empedocles or Galen, and to associate substance dualism with Plato. Nowadays, it is much more common to think of materialism as the prevailing orthodoxy and to associate substance dualism with Descartes. It is worth noting, however, that there is another conception of human beings, distinct from both materialism and substance dualism, that is sometimes associated with Descartes—namely, trialism.<sup>16</sup> As its name suggests, this further conception appeals to three different types of substance to explain the nature of human beings—namely, wholly material substances to explain their bodies, wholly immaterial substances to explain their minds (or souls), and complex substances of a further, distinct type to explain human beings themselves.

The trialist conception of human beings bears an interesting relation to both materialism and substance dualism. In order to clarify the nature of this relationship, we can think of trialism as follows:

### **Trialism**

- (T1) There are exactly three types of substance required to account for the nature of human beings—namely, wholly material substances, wholly immaterial substances, and complex substances partly composed of each.
- (T2) Human bodies are identical to wholly material substances.
- (T3) Human minds (or souls) are identical to wholly immaterial substances.
- (T4) Human beings are identical to complex substances that possess both bodies and minds (or souls) as proper parts.
- (T5) Human beings are, by nature, partly material and partly immaterial beings.

<sup>16</sup> See Cottingham 1985, who appears to have introduced this interpretation as well as the name 'trialism' into the contemporary literature.

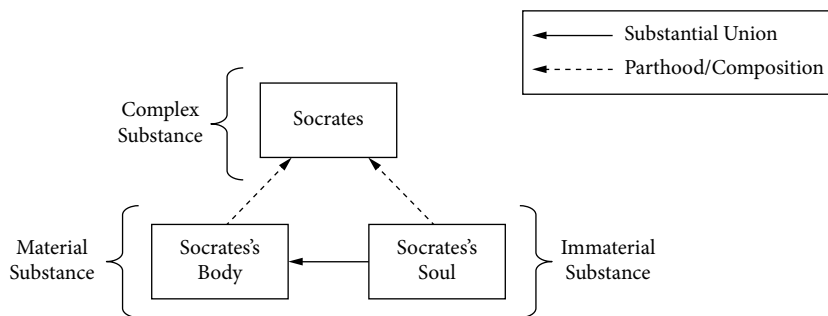


Figure 12.3 Trialism

Although trialism differs from both materialism and substance dualism in the number and types of substances it invokes, it bears some important structural similarities to each of these positions. Thus, like materialists, trialists think of human minds as proper parts of human beings; and like substance dualists, they think of human minds and bodies as distinct (or non-overlapping) substances. Of course, there are also some important differences. Unlike materialists, trialists do not think of human minds as material parts of human beings. And unlike substance dualists, they do not think of the relationship between human minds and bodies solely in terms of any sort of causal connection. On the contrary, trialists think of human minds as bearing a distinctive relation to human bodies: they are united to them in such a way as to compose a distinct type of substance. If we allow ourselves to speak of this relation as one of *substantial union*, we can once again illustrate this conception of human beings in the particular case of Socrates (Fig. 12.3).

Trialism has not received the sort of detailed analysis or attention that materialism and substance dualism have, either from philosophers or theologians. This is unfortunate, since it too appears to have a number of things going for it as a conception of human beings. Admittedly, trialism cannot be regarded as theoretically parsimonious. On the contrary, insofar as it appeals to three different types of substance, it is clearly worse off in this regard than either materialism or substance dualism. What is more, trialism can't *quite* preserve our common-sense intuition that human beings just are material substances or bodies—though it can come close, by saying that human beings are (partly) *composed of* them.

In almost every other respect, however, trialism performs as well as, if not better than, its materialist and dualist rivals, along the parameters we've been considering. Thus, insofar as trialism says that human beings are composed of *bodies*, it preserves each of the other major advantages of materialism—including the unity of human minds and bodies, as well as ordinary intuitions about the goodness of the human body and the badness of human death. Again, insofar as trialism says that human beings are composed of *immaterial souls*, it preserves the chief advantages of substance

dualism—namely, its ability to uphold traditional views about the immateriality of human beings, as well as the immortality of their souls. Indeed, insofar as trialism says that human beings are composed of both bodies and souls, it might appear to be the only conception that can do justice to all the various strands of scripture and tradition canvassed in §12.1. For it alone appears to be capable of explaining not only (a) why human death is the end of life as we know it (insofar as it takes for granted that death destroys the complex substance to which we are identical), but also (b) why human death need not spell the end of human life altogether (insofar as it also takes for granted that we are survived by our souls, which could in principle be reunited with a body to compose a complex substance or human being again).<sup>17</sup>

So much for our brief examination of these three different conceptions of human beings. Let us now consider the relevance of each for the proper interpretation of Aquinas's conception.

### 12.3 Thomistic Materialism vs. Thomistic Dualism

Although Aquinas's conception of human beings overlaps, in important respects, all three of the conceptions just examined, it cannot ultimately be understood in terms of any one of them. Still, the precise contours of his conception can be made clear by considering its relationship to each.

To begin, consider the relationship of Aquinas's conception to that of the materialists. Drawing on the results of previous chapters, it should be clear that, like the materialists, Aquinas conceives of human beings as identical to material substances or bodies of a certain type—namely, living bodies or organisms (§9.2). Admittedly, Aquinas differs from most contemporary materialists in his willingness to speak of human beings as possessing a soul or mind. Moreover, insofar as he thinks of the human soul or mind as a substantial form, it will not be possible for him to identify it with the brain or any other such material part. Even so, we have seen that his substantial forms can, at least in principle, be identified with ordinary properties of material objects (§5.3, §6.5, §11.4).

Commentators have sometimes suggested that, even if Aquinas himself regards the human mind as a wholly immaterial substance, his conception of human beings is itself perfectly compatible with certain forms of materialism.<sup>18</sup> On the face of it, this seems plausible. For Aquinas characterizes souls in general, and human minds in particular, in broadly functional terms—as those entities (whatever they are in themselves) that confer certain sorts of causal powers on their subjects (those associated with life in the case of souls in general, and those associated with rational thought and volition in the case of human minds in particular). But there is nothing in such a broadly functionalist characterization to exclude the possibility of identifying the mind or

<sup>17</sup> I shall return to issues of the afterlife in Ch. 13.

<sup>18</sup> E.g., Stump 1995 and 2003.

soul of a human being with something materialistically acceptable (such as a material part or property). What is more, in the case of the souls of all non-human animals, Aquinas appears to be committed to just this sort of identification.<sup>19</sup> Indeed, we might characterize his distinctive sort of materialism in the case of non-human animals as follows:

**Thomistic Materialism (about Non-Human Animals)**

- (TM1) There is exactly one type of substance required to account for the nature of non-human animals—namely, wholly material substances.
- (TM2) Non-human animal bodies are identical to wholly material substances.
- (TM3) Non-human animal souls are identical to immanent properties.
- (TM4) Non-human animals are identical to bodies that possess souls as proper parts (or constituents).
- (TM5) Non-human animals are, by nature, wholly material beings.

But if Aquinas can accept such materialism in the case of non-human animals, it might seem obvious that such materialism could, at least in principle, be extended to the case of human beings as well.<sup>20</sup>

At this point, however, we must be careful. For even if we grant that there is nothing in Aquinas's functional characterization of the human soul to exclude the possibility of identifying it with a wholly material object or property, Aquinas himself thinks that this possibility can be excluded on purely metaphysical grounds. Indeed, near the end of Chapter 11 (§11.4), we saw that Aquinas thinks that nothing but a subsistent, immaterial substance can confer on a subject the power for rational cognition. Whether his arguments for this conclusion are at all successful is, of course, open to doubt.<sup>21</sup> But Aquinas's commitment to the conclusion itself makes it clear that he cannot be interpreted as holding any form of materialism about human beings.<sup>22</sup>

Whatever we make of Aquinas's materialism about non-human animals, therefore, it might seem that we have no choice but to interpret his conception of human

<sup>19</sup> See, e.g., *ST* 1.75.3, where Aquinas argues that the souls of all non-human animals are merely inherent.

<sup>20</sup> There is some debate among commentators as to whether the souls of animals are best understood in terms of physical properties or some sort of *sui generis* type of non-physical property. See Madden 2013, ch. 8.

<sup>21</sup> It is also open to doubt whether it even makes sense for Aquinas to claim that an immaterial substance can play the same role that a property plays in non-human animals. But see §11.4 for a response to this latter doubt.

<sup>22</sup> As we saw in Chapter 11, it is precisely because the human soul must be conceived of along these lines that Aquinas is forced to distinguish forms in the purely functional sense from forms in the substantive sense of properties, and to insist that the human soul qualifies as a form only in the former sense. For further development of the case against any form of materialist interpretation of Aquinas, see Madden 2013, ch. 8 and Sharpe 2005.

beings along the lines of substance dualism. And, indeed, there are some striking similarities to be taken into account here. Like substance dualists, Aquinas appeals to two different types of substance to explain the nature of human beings—namely, material substances (or bodies) and immaterial substances (or souls). Like substance dualists, moreover, Aquinas identifies human bodies with substances of the first sort, and human minds (or souls) with substances of the second sort.

Despite these similarities, there are also some important differences to be noted. Unlike substance dualists, for example, Aquinas does not think that human beings can be identified with their souls, since that would entail the denial of certain obvious facts of experience:

An animal or a human being is the sort of thing that can be grasped by the senses and occur in nature. (SCG 2.57.1330)<sup>23</sup>

Unlike substance dualists, moreover, Aquinas rejects the assumption that the relation between human souls and bodies can be understood in terms of any sort of causal connection. Indeed, he regards this assumption as one of the most objectionable aspects of substance dualism, insofar as he takes it to undermine the unity of human beings as well as to misunderstand the nature of their death:

Plato maintained . . . that the relation of the soul to the body is like that of a sailor to a ship, or that of one who is clothed to his clothing. But this position cannot be upheld . . . For if the soul were in the body as a sailor is in a ship, then it would follow that the unity of soul and body is accidental. But, then, death, which brings about their separation, would not be a substantial corruption—which is obviously false. (QDA 1.260–286)

As Aquinas sees it, the only plausible way to understand the relationship between souls and bodies is in terms of the broadly Aristotelian, hylomorphic conception of the soul as a substantial form of the body. But, as he explicitly points out, such a conception requires us to think of the human soul as a proper part (or constituent) of the human being rather than as identical to the whole human being itself:

Since the soul is a part of the human body, it is not the whole human being, and my soul is not me. (*In I Cor.* 15.2.924)

Given that Aquinas's conception of human beings cannot be interpreted in terms of either materialism or substance dualism, one might wonder whether a trialist interpretation of it would fare better.<sup>24</sup> Indeed, insofar as Aquinas thinks of human souls as proper parts of human beings, and of human beings themselves as a type of

<sup>23</sup> The sort of criticism that Aquinas is raising here against substance dualism is common in the contemporary literature. To take just one particularly vivid example:

I think that when you look in the mirror, or down at your hands, you can actually see yourself. And when you hold your child, you do exactly that . . . These claims imply that we are not souls of the sort imagined by substance dualists. (Merricks 2001, 85)

<sup>24</sup> This sort of interpretation is at least hinted at in Hudson 2007, 220–1.

substance resulting from the union of human souls and bodies, it might seem that we have no choice but to interpret Aquinas's conception in these terms.

Admittedly, Aquinas's tendency to describe human beings as a type of material substance or body, despite the fact that they possess a wholly immaterial part (namely, the soul), might appear to constitute *prima facie* evidence against a trialist interpretation. That this is merely an appearance, however, becomes clear if we bear in mind that a substance qualifies as material, for him, just in case it possesses prime matter. Indeed, as we have seen (§8.2), Aquinas takes the possession of such matter to be precisely what distinguishes human beings, as well as all other material substances, from God and the angels, who are wholly immaterial beings. Still, it is worth noting that human beings are unique among material substances in possessing a wholly immaterial substance as a proper part. For the same reason, it might be helpful to distinguish, on Aquinas's behalf, two subtypes of material substance—namely, *partly material substances* (which include all and only human beings) and *wholly material substances* (which include all and only non-human material substances).<sup>25</sup>

Insofar as Aquinas conceives of human beings as partly material substances, and also thinks of their parts as related via something like substantial union, his conception obviously comes very close to that of the trialists. But even here, there are at least two crucial differences that must not be overlooked. First, although Aquinas agrees with the trialists that there are exactly three types of *being* required to account for human nature, he nonetheless rejects the trialist assumption that each of these beings is a distinct type of substance. For, as I have been at pains to emphasize throughout this work (Chs 1, 5–7, 10), the matter of a human being—namely, prime matter—cannot be understood as a substance, for Aquinas, or indeed as any type of individual. On the contrary, it must rather be understood as a type of non-individual stuff utterly incapable of existing on its own.<sup>26</sup>

Second, insofar as Aquinas takes human beings to be composed of prime matter and a human soul, the relation between their constituent parts cannot be understood in terms of substantial union—at least not if this relation is taken to be one that can only hold between distinct substances. On the contrary, it must be understood in terms of something more like inherence, where this is a type of dependency that can hold between substrata and forms of any sort (§3.5, §11.4). In this respect, too, Aquinas's hylomorphic conception of human beings differs from that of the trialist.

In the end, therefore, I think Aquinas's conception of human beings must be regarded as distinct from each of the other conceptions that we've considered. But

<sup>25</sup> See §13.6 for a complication regarding this understanding of the distinction.

<sup>26</sup> As noted in §11.4, Aquinas does sometimes use the term 'substance' so broadly as to apply even to matter. In this sense, Aquinas's position might be said to invoke three different types of "substance", and hence to qualify as a form of trialism. But given the more robust sense in which 'substance' is ordinarily used, both by contemporary philosophers and by Aquinas himself, characterizing his position in these terms is likely to be misleading, or at the very least to obscure one of its most distinctive features—namely, its conception of the matter of human beings in terms of non-individual stuff.

how are we to characterize it positively? In an important paper, Brian Leftow (2001) describes Aquinas's conception in terms of the provocative slogan, "souls dipped in dust". Leftow intends the slogan to apply to human beings themselves. But that seems misleading, if not mistaken, insofar as it suggests that they are identical to their souls, and hence that Aquinas accepts a form of substance dualism. Nonetheless, if we restrict the slogan to the constituent parts of human beings, it seems perfectly apt. For provided we think of dust in terms of non-individual stuff (rather than individual particles or substances), we can describe Aquinas's conception as one according to which human beings are composed of "souls dipped in dust".

For the sake of contrast with the other three conceptions of human beings that we have considered, let us characterize Aquinas's conception as a conjunction of five claims:

**Thomistic Dualism (about Human Beings)**

- (TD1) There are exactly two types of substance required to account for the nature of human beings—namely, partly material substances and wholly immaterial substances.
- (TD2) Human bodies are identical to partly material substances.
- (TD3) Human minds (or souls) are identical to wholly immaterial substances.
- (TD4) Human beings are identical to bodies that possess minds (or souls), as well as prime matter (or non-individual stuff), as proper parts (or constituents).
- (TD5) Human beings are, by nature, partly material and partly immaterial.

For the sake of completeness, moreover, let us illustrate this same conception for the particular case of Socrates (Fig. 12.4).

Given the importance of trialism for understanding Aquinas's views, as well as the fact that this position is habitually overlooked in debates about their proper classification, it might seem odd that I have chosen to refer to Aquinas's conception as *Thomistic dualism* rather than *Thomistic trialism*. There are, however, two reasons for this. The first reason is one that I have touched on already. In the context of contemporary debates, it is standard to individuate positions in philosophy of mind in terms of the number of different types of substances they invoke. But, as I noted earlier, the trialists invoke three different types of substance, whereas Aquinas invokes only two.<sup>27</sup> Despite the obvious similarities of Aquinas's conception to

<sup>27</sup> But see the qualification in the previous note. It's also important to recall Aquinas's distinction between complete and incomplete substances (§11.5). Strictly speaking, the partly material substances to which human beings are identical are complete substances (since they are not proper parts of any larger substances), whereas the wholly immaterial substances to which human souls are identical are incomplete substances (since they are proper parts of human beings). One could suggest, therefore, that Aquinas's conception of human beings is best understood as a type of substance monism, insofar as it invokes only



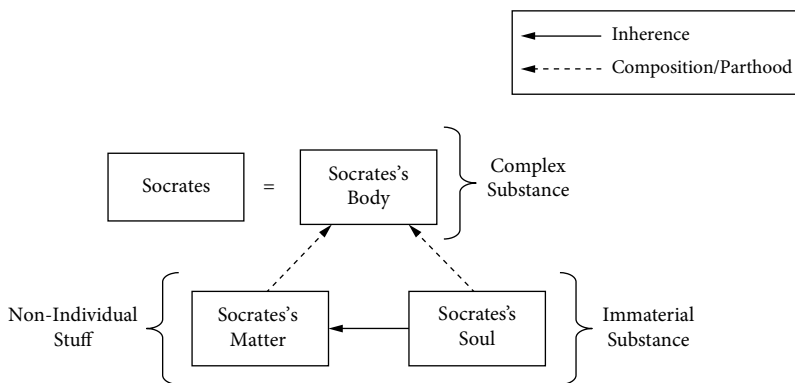


Figure 12.4 Thomistic Dualism

trialism, therefore, it still seems best, in the contemporary context, to characterize his conception in dualist (rather than trialist) terms.

But something similar is true, I think, even if we consider Aquinas's views in the context of late medieval debates in philosophy of mind. This brings us to a second, closely related reason. Like Aquinas, most late medieval philosophers accept some form of hylomorphism in philosophy of mind. But unlike Aquinas, most of them are happy to describe the matter of a human being as a type of substance in a robust sense (that is, as an individual that can subsist in the same sense as the human soul).<sup>28</sup> Even in the context of medieval debates, therefore, it would seem best to refer to Aquinas's conception of human beings as a type of substance dualism and to reserve the term 'trialism' for the views of his contemporaries.

If my interpretation of Aquinas is correct, it should be clear that his conception of human beings does mark out a distinctive position in philosophy of mind. As I noted at the outset, debates about the proper classification of Aquinas's views have focused exclusively on their relationship to the familiar positions of materialism and substance dualism. But it is precisely this focus, I think, that explains why such debates have reached an impasse. It is certainly true that, insofar as Aquinas conceives of human beings as identical to bodies that possess a subsistent immaterial soul, his position might seem to occupy some middle ground between these familiar positions. But, as we can now see, it is also true that, insofar as Aquinas conceives of the human soul as a proper part of human beings, his position is structurally much more like trialism than it is like either materialism or substance dualism. Ultimately, therefore, I think that if we want to locate Aquinas's conception on the cusp between

one type of complete substance to account for their nature. But this, too, is likely to be misleading, especially in the contemporary context.

<sup>28</sup> See again my discussion of the standard late medieval response to Aquinas's conception of prime matter in §2.1.

two positions in philosophy of mind, we ought to locate it on the cusp between substance dualism and trialism (rather than on that between materialism and substance dualism).

## 12.4 In Defense of Thomistic Dualism

My discussion so far has been primarily aimed at highlighting the *sui generis* nature of Aquinas's conception of human beings. Before concluding, however, I want to consider briefly the extent to which this same conception can be said to rival its chief competitors along the parameters that we've been considering. To this end, consider Table 12.1, which is intended to clarify the precise relationship that Thomistic dualism bears to each of our other three conceptions (I have used shading to emphasize similarities, and its absence to emphasize differences).

Table 12.1. Thomistic Dualism and Its Competitors—Similarities vs. Differences

	Materialism	Substance Dualism	Thomistic Dualism	Trialism
Number of substances invoked	1	2	2	3
Nature of the human body	Wholly Material	Wholly Material	Partly Material	Wholly Material
Nature of the human mind (or soul)	Material Part	Immaterial Substance	Immaterial Substance	Immaterial Substance
Relation of the human body to the human being	Identity	Causation	Identity	Parthood
Relation of the human mind (or soul) to the human being	Parthood	Identity	Parthood	Parthood
Nature of human beings	Wholly Material	Wholly Immaterial	Partly Material	Partly Material

As Table 12.1 helps to indicate, Thomistic dualism shares something in common with each of the other three conceptions of human beings we've considered, despite being distinct from all three. It shares the most in common with trialism, including its account of both (a) the nature of human beings and (b) their relationship to their souls. But it also shares important things in common with each of the other two conceptions. In the case of substance dualism, perhaps the most important thing is the number of different types of substance it invokes, whereas in the case of materialism, perhaps the most important thing is the identification of human beings with their bodies.<sup>29</sup>

<sup>29</sup> In this latter respect, however, it must be noted that Thomistic dualism departs significantly from materialism in thinking of human bodies as only partly material substances.

With this account of the precise relationship that Thomistic dualism bears to these other conceptions, I think we can see that it enjoys some distinctive advantages over them. Consider Table 12.2, which is intended to serve as a scorecard for keeping track of the relevant points of comparison.

Table 12.2. Thomistic Dualism and Its Competitors—Costs vs. Benefits

	Materialism	Substance Dualism	Thomistic Dualism	Trialism
1. Is theoretically parsimonious	+	—	—	— —
2. Upholds the unity of minds and bodies	+	—	+	+
3. Preserves the intuition that human beings are identical to bodies	+	—	+	+ / —
4. Emphasizes the goodness of the body	+	—	+	+
5. Doesn't minimize the badness of death	+	—	+	+
6. Accounts for the difference between human and non-human animals	—	+	+	+
7. Preserves the immortality of the soul	—	+	+	+

All the parameters listed in Table 12.2 correspond to what Aquinas takes to be important desiderata for a conception of human beings. I have used plus and minus signs (+, —) to indicate positive vs. negative performance along these parameters, with two minus signs (— —) indicating very poor performance and a combination of signs (+ / —) indicating merely average performance. A conception that scores well along parameters 1–2 will have certain theoretical virtues or advantages; one that scores well along parameters 3–5 will have advantages with respect to upholding traditional views about the materiality of human beings; and one that scores well along parameters 6–7 will have advantages with respect to upholding traditional views about the immateriality of human beings.

Of the three more or less familiar conceptions, trialism clearly earns the best score in terms of sheer number of advantages. It is significant, therefore, that Thomistic dualism shares all of its advantages over materialism and substance dualism, but none of its distinctive costs. There can be no doubt that Thomistic dualism is worse off than materialism when it comes to theoretical parsimony. But this is the only respect in which it is clearly worse off than either materialism or substance dualism. And, in any case, materialism won't be a live option for anyone committed to the immortality of the soul, much less to the immateriality of human beings generally.

All of this suggests that, at least when it comes to parameters 1–7, the real choice is between Thomistic and substance dualism. And even here the Thomistic conception might appear to be the clear victor, since only it would appear to do justice both to the materiality and the immateriality of human beings. Of course, how one ultimately evaluates such conceptions, even along the parameters we've been considering, will

depend in large part on how one weights the various costs and benefits associated with each. Materialists, for example, are not likely to be any more impressed by Thomistic dualism than by traditional substance dualism (or, for that matter, trialism). Even so, the foregoing is sufficient, I hope, to show that Thomistic dualism has enough going for it to deserve further consideration from contemporary philosophers, alongside other more familiar positions in philosophy of mind.

## 12.5 The Nature and Types of Substance Revisited

There is much more to be said about Aquinas's distinctive conception of human beings, some of which I will take up in Chapter 13. Before concluding this chapter, however, I want to briefly mention a few of the implications of what we've already seen of it for the proper understanding of Aquinas's broader ontology.

The first thing to note is that Aquinas's conception of human beings raises a serious complication for his understanding of the nature of substance in general. At the outset of this book (§1.5), I noted that Aquinas often speaks as if substances in a strict or proper sense could be identified with all and only basic particulars—that is, particulars that do not themselves have any particulars as proper parts. (Recall that a particular is a being that is both subsistent and individual.) If it were not for the special case of human beings, this way of speaking would be unproblematic. For all substances other than human beings are either simple substances—as in the case of immaterial substances such as God and the angels—or else substances composed only of matter and immanent properties—as in the case of all non-human material substances. But simple substances do not have any proper parts (much less any particulars as proper parts), and although substances composed of matter and immanent properties do have proper parts, none of their parts are particular (since matter is non-individual and immanent properties are inherent or non-subsistent). By contrast, human beings are composed of matter and an immaterial soul. But insofar as such a soul is both subsistent and individual, human beings themselves have particulars as proper parts, and hence provide a counterexample to Aquinas's talk of all substances as basic particulars.

Aquinas is aware of this concern. Indeed, as we have seen (§§11.4–5), he deals with it in the context of addressing the question of whether the human soul can subsist—and, in particular, whether it can subsist without violating the Aristotelian dictum that no substance can be composed of another substance. His standard response, however, is to draw a distinction between complete substances (such as a whole human being) and incomplete substances (such as the soul or material parts such as a hand or eye), and to insist that there is no problem with complete substances having incomplete substances as proper parts.<sup>30</sup> But it is hard to see how this response is supposed to address the original concern.

<sup>30</sup> See again the discussion in §11.5.

Although Aquinas does not explicitly say so, I suspect that his talk of completeness in this context is connected to his views about individuation. Aquinas's views about individuation are complicated, and I cannot hope to do justice to them here. In other work, however, I have argued that although the human soul is both subsistent and individual, for Aquinas, it is not individuated in itself.<sup>31</sup> That is to say, what serves as its principle of individuation—in particular, a specific portion of matter—is wholly extrinsic to it. In this respect, human beings differ from their souls. For unlike the human soul, a human being is individuated in itself, since the matter that serves as its principle of individuation is one of its proper parts, and hence wholly intrinsic to it.

If I am right about all this, then perhaps Aquinas's solution to the original concern can be put as follows. Although all substances are basic particulars, merely lacking particulars as proper parts is not sufficient for basic particularity. On the contrary, we must distinguish two different types of particular—those which are complete vs. those which are incomplete. For the sake of clarity, we can define these two types as follows:

**Complete vs. Incomplete Particulars**

- *Complete particular* =<sub>def</sub> A particular whose principle of individuation is intrinsic to it.
- *Incomplete particular* =<sub>def</sub> A particular whose principle of individuation is not intrinsic to it.

This distinction corresponds to Aquinas's distinction between complete and incomplete substances. And insofar as only the former is a plausible candidate for a basic particular, and Aquinas clearly thinks that no complete substance can contain another complete substance as a proper part, it appears that we can revise our understanding of the distinction between basic and non-basic particulars as follows:

**Basic vs. Non-Basic Particulars—Revised**

- *Basic particular* =<sub>def</sub> A complete particular that is not itself composed of any complete particulars.
- *Non-basic particular* =<sub>def</sub> A particular that is either incomplete or else composed of at least one complete particular.

If this understanding of the distinction is correct, then we have a way of preserving Aquinas's talk of all substances as basic particulars. For on this revised understanding, even human beings will now qualify as basic particulars. Obviously, this is

<sup>31</sup> See Brower 2012b.

somewhat speculative, but at the very least it shows the way in which Aquinas's views about the human soul affect his broader ontology.

In addition to complicating Aquinas's understanding of the nature of substance in general, Aquinas's views about the human soul also have implications for the types of material substance he recognizes. Up to this point, I have been speaking as if Aquinas's ontology could be neatly divided into two realms—an incorporeal realm, which includes wholly immaterial substances such as God and the angels, and a corporeal realm, which includes all other creaturely substances. As we can now see, however, this is an oversimplification. The realm of corporeal beings must itself be subdivided into two further realms—a wholly corporeal realm, which includes substances composed of matter and immanent properties, and a merely partly corporeal realm, which includes substances composed of matter and an immaterial soul. It is, of course, to this third realm that human beings must be said to belong. Indeed, this third realm would appear to include all and only human beings.<sup>32</sup>

Aquinas often speaks as if human beings exist on the horizon separating the corporeal and incorporeal world.<sup>33</sup> In light of the foregoing, this makes perfect sense. Insofar as human beings are composed of prime matter, they are like other substances in the (wholly) corporeal realm. But insofar as they are also composed of a subsistent, immaterial soul, they are unlike any other substances in this realm. Indeed, the threefold distinction of realms helps to explain the placement of Aquinas's discussion of human beings in the first part of his *Summa Theologiae*. There he begins his so-called treatise on human nature at question 75, only after he has treated God and the angels (qq. 2–64) on the one hand, and wholly material substances (qq. 65–74) on the other. What is more, he organizes his discussion as a whole in this treatise around the human soul, focusing in particular on its distinctive nature, powers, and activities (qq. 75–89). This, too, makes perfect sense, given that the human soul is precisely what distinguishes human beings from all other (wholly) material substances—insofar as it is a type of (incomplete) immaterial substance rather than a property.

In the end, therefore, it would appear that we should represent Aquinas's complete account of material substances as indicated in the diagram at Fig. 12.5.<sup>34</sup>

Although human beings comprise a distinctive type of substance—namely, partly material substances—such substances do not themselves comprise a fundamentally distinct type of being. On the contrary, they have the same mode of being as all other members of the Aristotelian category of substance, and hence merely comprise a distinct subtype of created substance.<sup>35</sup> Even so, I do think that Aquinas's views

<sup>32</sup> But see §13.6 for a further complication.

<sup>33</sup> See, e.g., QDA 1.

<sup>34</sup> Compare this diagram (Fig. 12.5) with our earlier representation of Aquinas's complete account of material substances at Fig. 5.4 in §5.5.

<sup>35</sup> See again §2.4, where I describe the mode of being common to all created substances as *dependent basic particularity*.

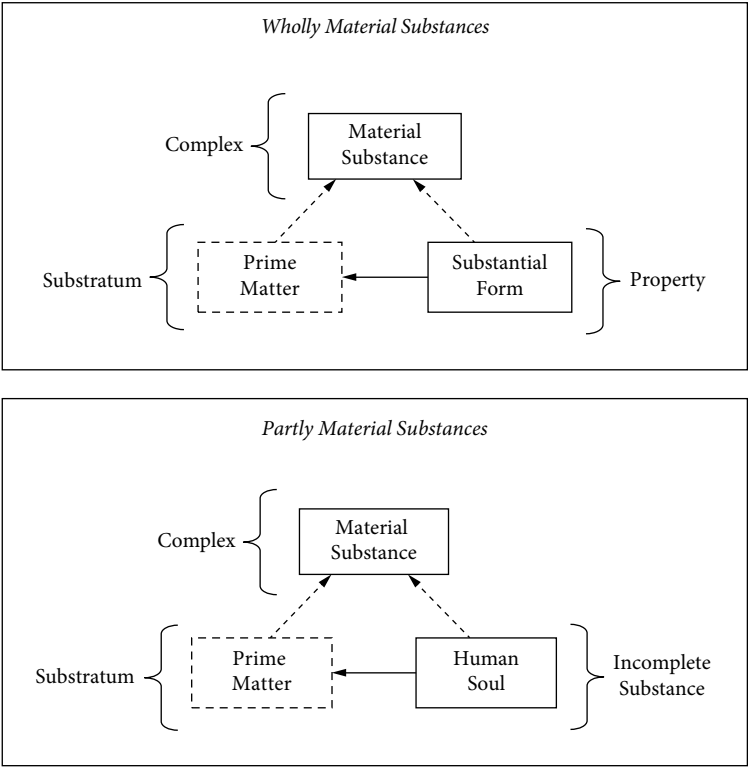


Figure 12.5 Material Substances—Complete Account

about the human soul force us to recognize one further fundamental *type* of being in his ontology, as well as one further fundamental *mode* of being. For insofar as the human soul both subsists and inheres, it is unlike any other type of being in Aquinas’s ontology. And insofar as the human soul alone is capable of both subsisting and inhering, it would seem to be characterized by a distinctive mode of being—namely, that which we referred to in Chapter 11 as *mixed subsistence* (§11.5).

# 13

## The Afterlife

In Chapter 12, I approached Aquinas's conception of human beings from the perspective of the relationship between human minds and bodies. In this final chapter, I approach this same conception from the perspective of the afterlife. For reasons that will emerge, Aquinas's views about the afterlife introduce some important nuances to what we've seen of his mind-body dualism, as well as his views about the nature of change, hylomorphism, and material objects more generally.

Like Aquinas's account of the relationship between human minds and bodies, his views about the afterlife are a matter of considerable controversy. Indeed, contemporary debates on this score are, if anything, even more intractable than those surrounding the classification of his views in philosophy of mind. Given the nature of this controversy—the interpretive difficulties it involves, as well as the deep entrenchment of its participants—I cannot hope to resolve it completely here. Even so, I am convinced that the intractability of these debates owes, in large part, to a failure to appreciate Aquinas's theological commitments regarding the Christian doctrine of the Incarnation. In what follows, I argue that these commitments not only provide an escape from the impasse of current debates, but also suggest a novel and independently attractive interpretation of his views about the afterlife.

### 13.1 Two Thomistic Models of the Afterlife

Aquinas's views about the afterlife for human beings are obviously shaped, to a large extent, by his views about the special nature of the human soul. Indeed, as we have seen (§11.4), Aquinas takes his arguments for the subsistence of the human soul to provide support for a doctrine he is committed to on purely theological grounds—namely, the doctrine of the immortality of the human soul.

What is not, perhaps, so obvious is that Aquinas's views about the afterlife are equally shaped by a feature of the human soul that it shares in common with all other forms—namely, its inherence. In fact, Aquinas takes the double nature of the human soul, its subsistence and inherence, to provide support for a further theological doctrine—that of the resurrection of the body:

The [human] soul is, by nature, united to a body. For it belongs to its essence to be the form of a body. It is, therefore, contrary to the nature of the soul to be absent from the body. But



nothing which is contrary to nature can continue forever. The soul will not, therefore, continue to exist forever without the body. But the soul will continue to exist forever. It must, therefore, eventually be reunited with the body, which just is [for the same body] to rise again. It would seem, therefore, that the immortality of the soul requires the future resurrection of bodies. (SCG 4.79.10.4135)

Insofar as the human soul is, by nature, a subsistent being, Aquinas thinks that it will exist forever. But insofar as the human soul is also, by nature, an inherent being, it cannot merely subsist forever. On the contrary, Aquinas tells us, insofar as “it belongs to its essence to be the form of a body” it must “eventually be reunited with the body, which just is [for the same body] to rise again”. In short, the double nature of the human soul underwrites both the immortality of the soul and the resurrection of the body.

Aquinas’s views about the afterlife for human beings raise a host of questions. But contemporary debates have tended to focus on just one of them—namely, what happens to human beings themselves during the interim following their death and prior to resurrection? When Socrates dies, there can be no doubt, for Aquinas, that his separated soul survives his death. But what about Socrates himself? We can distinguish two models for interpreting Aquinas’s views here, corresponding to the two different possible answers that he could give to such questions. On the one hand, there is what we might call the *cessationist model of the afterlife* (or *cessationism*, for short).<sup>1</sup> According to this model, when Socrates dies, he temporarily ceases to exist, only to return at the general resurrection of the dead, when his separated soul is reunited with matter.<sup>2</sup> On the other hand, there is what we might call the *survivalist model of the afterlife* (or *survivalism*, for short).<sup>3</sup> According to this model, Socrates does not cease to exist at death, even temporarily, but rather survives his death along with his separated soul. What ceases to exist at Socrates’s death, therefore, only to return at the general resurrection of the dead, is not Socrates himself—for he is there all along—but only his body.<sup>4</sup>

<sup>1</sup> This interpretation of Aquinas’s views is sometimes referred to in the literature as *the standard account* or *the corruptionist account*. I avoid these terms on the grounds that they are tendentious, suggesting that the alternative is either non-standard, somehow in the minority, or else inconsistent with the view that human beings are corrupted at death. By contrast, *cessationism* is meant to be a purely descriptive term.

<sup>2</sup> Although Socrates’s soul is reunited with matter at the resurrection, it need not be the same matter that it was previously united with. As we have seen (§11.2), Aquinas thinks that the matter of Socrates changes over time, and hence that the identity of his body isn’t dependent on the identity of his matter. Even so, Aquinas is often at pains to show that the matter with which Socrates’s soul is reunited at the resurrection will include at least a portion of that matter with which it was united in life. See, e.g., SCG 4.81–82, esp. 82.12. For further texts and discussion, see Lang 1998, esp. §IV.

<sup>3</sup> This interpretation of Aquinas’s views is sometimes referred to in the literature as *the alternative account*, though it has also been referred to as *the survivalist account*. Here again my use of *survivalism* is meant to be purely descriptive, and hence to beg no questions as to pedigree or historical prominence.

<sup>4</sup> Most commentators think of survival as an all or nothing affair, and hence that Socrates either survives his death or not (full stop). But some are prepared to speak of Socrates as *partially* surviving his death in virtue of being survived by one of his parts—namely, his soul. (See in particular Pasnau 2002, esp. 387–9.) For my purposes here, anything less than full survival qualifies as a form of cessationism.

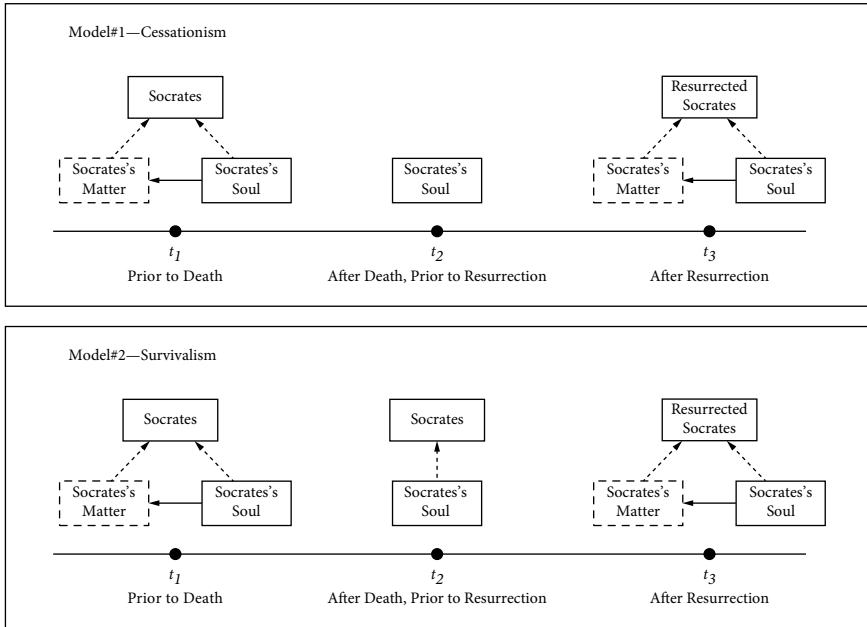


Figure 13.1 Two Thomistic Models of the Afterlife

I have illustrated these two Thomistic models of the afterlife for the particular case of Socrates at Fig. 13.1.<sup>5</sup> In what follows, moreover, we can think of the contemporary controversy surrounding Aquinas's views of the afterlife as that of deciding which of these two models best represents his views.<sup>6</sup>

## 13.2 The Problem of the Afterlife

Initially, it might seem odd that there is any controversy surrounding Aquinas's views of the afterlife. For insofar as human beings are clearly a type of material

<sup>5</sup> As always, solid arrows represent the relation of inherence, whereas dotted arrows represent that of parthood or constituency. In this context, it is important to emphasize that the relata of these relations are always distinct (or non-identical). Hence, it might be better to speak of the dotted arrows as representing the relation of proper parthood or constituency.

Note that both of these models bring with them some significant metaphysical costs or commitments. In particular, cessationism requires the possibility of intermittent or "gappy" existence—that is, the possibility of something's ceasing to exist at one time and coming back into existence at another. And survivalism requires the possibility of something's being composed, at least temporarily, of a single proper part. I shall return briefly to the second of these two commitments near the end of §13.6.

<sup>6</sup> For detailed defenses of cessationism, see Pasnau 2002, 380–93; Toner 2009a, 2009b, 2010, and 2012; and van Dyke 2007 and forthcoming. For detailed defenses of survivalism, see Brown 2005, 120–4 and 2007b; Eberl 2000 and 2009; Oderberg 2012; and Stump 2003, 51–4 and 2006. For further references to these views in the literature, see the list in Toner 2012.

substance that undergoes a substantial change at death, isn't it obvious for him that they cease to exist at death, if only temporarily?

As it turns out, things are not so simple. Indeed, what makes Aquinas's views about the afterlife difficult to interpret is that there is powerful evidence for thinking that he accepts each of the following claims:

**The Problem of the Afterlife**

- (1) Human beings are essentially human.
- (2) Human beings cease to be human at death.
- (3) Human beings do not cease to exist at death, but rather survive.

These claims appear to form an inconsistent triad. Insofar as Aquinas accepts (1) and (2), he would appear to be committed to cessationism. For if Socrates is essentially human, and yet ceases to be human at death, it would seem that he must also cease to exist at death. But, of course, insofar as Aquinas accepts (3), he is obviously committed to rejecting cessationism in favor of survivalism, and hence to accepting the view that Socrates survives his death.

To appreciate the force of this problem, we must be clear about the strength of the evidence for Aquinas's acceptance of each of the claims in question. We have already considered the main evidence for Aquinas's acceptance of (1) and (2) in previous chapters (esp. Chs 11–12)—namely, certain aspects of his views about human nature and death. In the remainder of this section, therefore, I will focus on the evidence for thinking that Aquinas accepts (3)—namely, certain aspects of his views about the afterlife that we have not yet considered. Even so, since it will be useful to have all the relevant evidence before our minds as we proceed, I will briefly review the aspects of Aquinas's views about human nature and death that appear to commit him to (1) and (2) before turning to those that appear to commit him to (3).<sup>7</sup>

*Human nature.* Aquinas's acceptance of (1) appears to be a straightforward consequence of his views about human nature. His mind–body dualism requires that human beings are, by nature, partly material substances—that is, substances composed of both matter and a human soul (§12.3). But insofar as a substance is

<sup>7</sup> Commentators sometimes speak as if there were decisive textual evidence favoring either cessationism or survivalism. This is especially true in the case of cessationists, who place considerable emphasis on Aquinas's talk of what the human soul does in the afterlife. (See again the references in the previous note.) But it is also true, to a lesser extent, of survivalists, who place considerable emphasis on Aquinas's talk of what possessors of a human soul do in the afterlife. (See esp. Stump 2006 and Brown 2013.) For reasons that will become clearer, I think it's a mistake to suppose that the textual evidence alone can be regarded as decisive in favor of either model. Indeed, as we shall see, Aquinas's texts are either inconsistent or ambiguous, and hence cannot be evaluated apart from the sorts of systematic considerations to be canvassed shortly. Even so, I shall return in §13.5 to what are often regarded as clear proof texts for cessationism.

composed of matter, it just is a material substance or body of some type. And insofar as a body is composed of a human soul, it is a specific type of living body or organism—namely, a rational animal. Hence, human beings are, by nature, rational animals. But this is just another way of saying that human beings are essentially human. For rational animals are, by definition, human, and what belongs to a thing's nature is essential to it.<sup>8</sup> As Aquinas explicitly asserts in the particular case of Socrates:

*Being human* belongs to Socrates by nature (*per se*) . . . For 'Socrates is human' is an essential (*per se*) predication, since if Socrates could be defined, *being human* would have to be included in his definition. (*In Meta.* 1.1.21)

Every predication is of one of three types. The first type is one in which what is predicated of some subject pertains to its essence, as when I say 'Socrates is human' or 'a human being is an animal'. The category of *Substance* is to be understood in accordance with predications of this type. (*In Phys.* 3.5.15)

*Nature of death.* As in the case of (1), Aquinas's acceptance of (2) appears to be a straightforward consequence of certain of his views—in this case, his views about the nature of death. Aquinas takes death to be a substantial change, one in which an organism's soul is separated from its body (§11.4). Insofar as an organism's soul is separated from its body, however, the organism itself ceases to be animate or alive, and hence to be an animal of any sort. But, of course, if that is right, then Socrates must cease to be a rational animal or human being at death. And the same is true for all other human beings.

So much for the evidence in support of (1) and (2). What about that in support of (3)? As it happens, there are several different types of evidence that are often mentioned in this connection. Here I will focus only on what I take to be the two strongest types—namely, Aquinas's views about both (i) post-mortem thinking and willing and (ii) post-mortem punishment and reward. As we shall see, both of these two types of evidence are closely connected to Aquinas's views about personhood.<sup>9</sup>

*Post-mortem thinking, willing, and personhood.* When Socrates dies, Aquinas thinks that Socrates's separated soul continues to support rational thought in the absence of any body. Aquinas takes the possibility of such post-mortem thinking to be established by his arguments for the subsistence of the human soul (§11.4). More importantly, however, he takes the actuality of such thinking to be required by Christian scripture and tradition. Aquinas places special weight on the biblical story of the rich man and Lazarus (Luke 16.19–31). This story tells of a rich man,

<sup>8</sup> Compare Pasnau (2002, 387), who says that Aquinas "treats as axiomatic Aristotle's commitment to the essentiality of species membership".

<sup>9</sup> Another type of evidence, also closely connected with Aquinas's views about personhood, has to do with the doctrine of the communion of saints, and in particular the traditional view that departed saints pray for us prior to the general resurrection. See, e.g., Brown 2013. Aquinas's views about prayer, however, raise a number of difficulties, so I shall hold off discussing them until §13.5.

traditionally known as ‘Dives’ (which is Latin for ‘rich man’), who mistreats a poor beggar, Lazarus, in life. Immediately after death, Dives is forced to face the consequences both for himself and for his family, and as a result is in agony. Although now often regarded as a parable, Aquinas takes this story to be a record of actual events, and hence to require that Dives’s separated soul continues to support a variety of mental states, including not only rational thought but also desire and volition.<sup>10</sup>

Aquinas’s views about post-mortem thinking and willing raise a number of questions, but the important one for our purposes is: What is its proper subject or bearer? That is to say, who or what is doing the thinking after death and prior to resurrection? Unless Aquinas accepts claim (3), the answer will have to be: separated human souls, not human beings. For if Dives’s soul supports the thought ‘I am in agony’ after death, but Dives himself no longer exists, then we shall have to say that his soul is serving as the subject for the relevant act of thinking or suffering. But this answer seems incompatible with Aquinas’s views about personhood.

Like other medieval philosophers, Aquinas accepts the traditional definition of personhood given by Boethius:

**Traditional Definition of Personhood**

A person (or in Greek, *hypostasis*) =<sub>def</sub> An individual substance of a rational nature.

Insofar as the human soul is both individual and subsistent, for Aquinas, it counts as a type of “individual substance” (§§11.4–5). And insofar as it supports rational thought and volition, it would seem to count as an individual substance of “a rational nature”. Even so, Aquinas insists that the traditional definition should not be understood in such a way as to apply to the human soul:

Not just any sort of individual substance is a *hypostasis* or person. On the contrary, only an individual substance having the complete nature of a species. Hence, neither a hand nor a foot can be called a *hypostasis* or person. And, likewise, neither can the soul, since it is [only] part of the nature of a human being (*pars speciei humanae*). (ST 1.75.4 ad 2)

As Aquinas tells us in this passage, it is not the human soul that qualifies as a person, but only the whole human being of which it is a part. Indeed, his language here is intended to put us in mind of a distinction that he makes use of in contexts where he is discussing the subsistence of the human soul. In such contexts, as may be recalled (§11.5), Aquinas insists that we must distinguish two different types of individual substance—namely, those that fall under some natural kind and those that are parts

<sup>10</sup> See van Dyke forthcoming for an extended discussion of Aquinas’s understanding of this story, including his assertion that: “what is said in the Gospel about Lazarus and the rich man is something that actually occurred” (QDA 19 ad 11).

of some larger substance falling under such a kind. The former are said to be "complete" (or have "the complete nature of a species" as he now tells us), whereas the latter are said to be "incomplete" (in this same sense). As Aquinas makes clear in the passage just quoted, he takes the traditional definition of personhood to apply only to complete substances, and hence to exclude things such as the soul, which are parts of larger substances. But, of course, if that is right, then how could the soul possibly serve as the proper subject or bearer of mental states for him? For, presumably, it is only persons that can think and exercise their will.

It cannot be denied that Aquinas often speaks *as if* it were individual human souls rather than whole human beings or persons that think and will, love and hate, and so on.<sup>11</sup> Thus, in the context of his arguments for the subsistence of the human soul, he suggests that it is precisely because the human soul can "act on its own" (*per se agere*) that it can subsist or "exist on its own" (*per se existere*)—where the type of action at issue is rational thought or cognition. As commentators recognize, however, such ways of speaking cannot always be taken literally. On the contrary, at least prior to the soul's separation from the body, such modes of speech must instead be regarded as mere conveniences employed for the sake of indicating the means by which human beings themselves engage in rational thought and volition. For as Aquinas himself tells us, in a passage that is often cited in this context:

We can *say* that the soul thinks, just as we can *say* that the eye sees. But it is more appropriate to say that the human being thinks *by means of* the soul. (ST 1.75.2 ad 2)

It is important to note, however, that Aquinas's point here does not appear to be restricted to the soul's existence prior to its separation from the body. For the passage itself forms part of his response to an objection which claims that the soul cannot be said to subsist, or exist on its own, after separation from the body precisely because it cannot properly be said to act on its own. Thus, in the text immediately preceding that just quoted, Aquinas says:

The phrase 'existing on its own' (*per se existens*) can sometimes be said of a thing insofar as it lacks the sort of inherence associated with an accident or a material form, even if it is a part. Even so, what is said to subsist in the strict and proper sense is neither inherent in the ways just mentioned nor a part. In this sense, therefore, neither an eye nor a hand could be said to subsist on its own or, consequently, to act on its own. For the same reason, the actions of parts are [strictly and properly] attributed to the whole by means of the parts (*per partes*). For we say that a man sees by means of his eye, and that he touches by means of his hand, where this is different from the way in which a hot thing warms something by means of its heat (since strictly speaking there is no sense in which its heat does the warming). (ST 1.75.2 ad 2)

<sup>11</sup> Indeed, in certain contexts (e.g., ST 1–2.8–9), he speaks as if it were certain *faculties* or *powers* of the soul that perform the relevant actions—that is to say, as if it were the intellect that thinks and the will that wills.

Even after death, therefore, the soul would appear to be the *instrument* or *means* of rational thought and volition, for Aquinas, rather than its proper subject or bearer. But, of course, if that is right, then individual human beings, such as Socrates and Dives, must survive their death in order to serve as the proper subjects for the mental states that continue to be supported by their separated souls.

*Post-mortem punishment, reward, and personhood.* In addition to Aquinas's views about post-mortem thinking and willing, there is a second, not wholly independent aspect of his views about the afterlife that seems to require his acceptance of claim (3). In line with traditional Catholic theology, Aquinas holds that, after human beings have died, there is a divine judgment in which God distributes punishments and rewards for human actions performed in life. As Aquinas sees it, moreover, the distribution of such punishments and rewards must occur prior to the resurrection of the body:

Reward or punishment must be given to rational creatures by the providence of God in the same way that the perfections owed to natural things are given to them. In the case of natural things, however, perfections are given in such a way that each thing immediately receives the perfection it is owed (unless there is some obstacle on the part of giver or receiver). But [human] souls are owed glory or punishment immediately after they have been separated from the body. They will, therefore, immediately receive one or the other. Neither the reward of the good nor the punishment of the bad will be put off until their souls take up their bodies again. (SCG 4.91.5.4250)

As in the case of Aquinas's views about post-mortem thinking and willing, so too his views about post-mortem punishment and reward would appear to require that human beings survive their death along with their separated souls. Presumably when Socrates dies, it is not his soul that is judged by God, but Socrates himself, since he is the one who performed the actions that serve as the basis for God's judgment. For the same reason, it is not Socrates's soul that deserves post-mortem punishment or reward, but Socrates himself. Evidently, therefore, Socrates himself must survive his death in order to receive the punishment or reward that he deserves. And, of course, the same is true in the case of all other human beings.

Once again, it cannot be denied that Aquinas sometimes speaks *as if* it were individual human souls that receive the relevant punishment or reward. In fact, in the passage just quoted, Aquinas speaks of "[human] souls" rather than whole human beings as "owed glory or punishment" immediately following death. But here again such modes of speech would appear to be mere conveniences. Indeed, given what we've seen of Aquinas's views about personhood, it is not clear how they could possibly be taken literally. For if the human soul is not a person, it would not appear to be capable, even in principle, of being "owed" punishment or reward, much less of receiving it on someone else's behalf.<sup>12</sup>

<sup>12</sup> But see Toner 2012 for a defense of the view that, for Aquinas, our souls could be punished on our behalf.

In light of the foregoing, it should be clear that there is a genuine difficulty when it comes to deciding which of our two Thomistic models best fits Aquinas's views of the afterlife. For insofar as his views about human nature and death seem to commit him to claims (1) and (2), cessationism would seem to be the better of the two. But insofar as his views about post-mortem thinking and willing, punishment and reward, seem to commit him to claim (3), survivalism would seem to be the better model.

It is, of course, possible that Aquinas's views about the afterlife are simply inconsistent. In that case, there will be no solution to what I am calling *the problem of the afterlife*. In order to resist this conclusion, most commentators have assumed that, despite appearances, Aquinas must have rejected at least one of the claims that give rise to the problem in the first place. No one, to my knowledge, has challenged Aquinas's commitment to (1). In effect, therefore, the contemporary controversy has focused on which of the other two claims he can be said to reject. Even here, however, commentators have tended to approach their preferred interpretation indirectly, with cessationists insisting that the evidence for Aquinas's commitment to (2) is so strong that (3) is the claim that he must be said to reject, and with survivalists insisting on just the opposite.

Like other commentators, I want to resist the conclusion that Aquinas's views about the afterlife are inconsistent. Unlike them, however, I think it is a mistake to suppose either that claims (1)–(3) form a genuinely inconsistent triad or that Aquinas rejects any of them. In order to see why, we must take a brief look at Aquinas's understanding of certain aspects of the Christian doctrine of the Incarnation. For, in this context, it becomes clear not only that claims (1)–(3) are jointly consistent, for Aquinas, but also that there is at least one human being to whom they must be said individually to apply.

### 13.3 The Incarnation and the Afterlife

The Incarnation is an important Christian doctrine, one whose essential elements may be summarized as follows: at a certain point in time, and in the person of Christ, God took on human nature, thereby becoming fully human without ceasing to be fully divine. Although this brief summary captures the essence of the doctrine, a complete understanding of the Incarnation requires setting it in the context of two other Christian doctrines—namely, the doctrine of the Trinity (according to which God exists in three persons, Father, Son, and Holy Spirit) and the doctrine of the Atonement (according to which God was in Christ reconciling the world to himself). Consider, for example, how Christ's incarnation is explained in the profession of faith that has come to be known as the Nicene Creed:

We believe in one Lord, Jesus Christ,  
the only Son of God,  
eternally begotten of the Father,  
God from God, Light from Light,



true God from true God,  
 begotten, not made,  
 of one Being with the Father.  
 Through him all things were made.  
 For us and for our salvation  
 he came down from heaven:  
 by the power of the Holy Spirit  
 he became incarnate from the Virgin Mary,  
 and was made man.  
 For our sake he was crucified under Pontius Pilate;  
 he suffered death and was buried.  
 On the third day he rose again  
 in accordance with the Scriptures. (*Book of Common Prayer* 1979)

As this creedal statement helps to make clear, a complete understanding of the Incarnation presupposes the doctrines of both the Trinity and the Atonement. For it is only the second person of the Trinity—that is, the Son of God (or the Word), not the Father or the Holy Spirit—that became incarnate in Christ. Indeed, according to the traditional understanding of the Incarnation, Christ just is the second person of the Trinity.<sup>13</sup> Again, when the second person became incarnate in Christ, he did so “for us and for our salvation”. Likewise, his crucifixion, death, burial, and resurrection were done “for our sake”. Indeed, according to the traditional understanding of Christ’s death and resurrection in particular, they signal the sort of afterlife that awaits all human beings.<sup>14</sup>

In some contexts, it is important to distinguish the doctrine of the Incarnation from that of the Trinity and Atonement. In what follows, however, it will not be necessary to insist on such distinctions. Instead, we can simply think of the Incarnation as including all the various sorts of claims that are traditionally made about the incarnate Christ and focus in particular on Aquinas’s understanding of those that bear most directly on the problem of the afterlife.

As Aquinas understands the Incarnation, it has some very specific implications regarding Christ’s human nature, death, and afterlife. Indeed, for reasons I shall now explain, his understanding of this doctrine commits him to specific instances of each of the three claims that give rise to the problem of the afterlife in the first place:

#### **Christ and the Problem of the Afterlife**

- (1<sub>C</sub>) Christ is essentially human.
- (2<sub>C</sub>) Christ ceases to be human at death.
- (3<sub>C</sub>) Christ does not cease to exist at death, but rather survives.

<sup>13</sup> Compare John 1.14: “And the Word became flesh and dwelt among us, full of grace and truth; we have beheld his glory, glory as of the only Son from the Father.”

<sup>14</sup> Compare 1 Cor. 15.

Consider first claim (1<sub>C</sub>). That Aquinas is committed to accepting this claim is clear, I think, from what he takes the Incarnation to imply about Christ's humanity:

Christ is said to be human in the very same sense as all other human beings—that is, as belonging to the very same species, and so “made in the likeness of human beings” as the Apostle [Paul] says in Philippians 2.7. Now it belongs to the nature of the human species to possess a [human] soul united to a body. For the form does not constitute the species unless it is serving as the actuality of some matter (for this is the terminus of a generation by which the species is introduced into nature). For the same reason, it is necessary to say that Christ possessed a [human] soul united to a body. Indeed, to say the contrary is heretical, as it denies the truth of Christ's humanity. (ST 3.2.5)

It is clear from this passage that Aquinas takes Christ to be truly human. It is also clear that he takes the “truth of Christ's humanity” to require that Christ was human “in the very same sense as all other human beings”—or, more literally, that he is “univocally human” (*homo univoce*). But all other human beings are human by virtue of possessing a human nature.<sup>15</sup> Hence the same must be true of Christ. Thus, in order for Christ to belong “to the very same species” as all other human beings, he had to take on a human nature in addition to the divine nature he already possessed. As we might have expected from what we've seen of Aquinas's mind-body dualism (§12.3), moreover, this in turn required Christ to take on a “[human] soul united to a body”—or, better, it required him to take on a human soul united to matter, and thereby to become a human body (i.e., a partly material substance composed of both matter and a human soul).

Consider next claim (2<sub>C</sub>). Aquinas's commitment to accepting this claim is, I think, no less clear than that in the case of (1<sub>C</sub>). Indeed, it would seem to follow directly from what Aquinas takes the Incarnation to imply about the “truth of Christ's death”:

It is an article of faith that Christ truly died. Hence to assert anything that denies the truth of Christ's death is an error against the faith . . . But it belongs to the truth of a human being's or an animal's death that, by virtue of its death, it ceases to be human or animal. For the death of a human being or an animal results from the separation of the soul, which is part of the very nature of the animal or human being (*quae complet rationem animalis vel hominis*). Speaking strictly and without qualification, therefore, it is an error to say that Christ was a human being during the three days of his death. Nonetheless, it can be said that Christ was a *dead* human being during these same three days. (ST 3.50.4)

Just as it would be heretical to deny the truth of Christ's humanity, so too, Aquinas thinks, it would be “an error against the faith” to deny the truth of his death. And just as the former requires Christ to be univocally human, so too the latter requires him to undergo the same sort of change that all other human beings undergo at death. As we might have expected from what we've seen of Aquinas's views about the nature of death (§11.4), moreover, he takes this to be a change in which something “ceases to

<sup>15</sup> See, e.g., ST 3.17.1: “The term ‘human being’ signifies something possessing a human nature (*habentem humanitatem*).”

be human or animal”.<sup>16</sup> For the same reason, Aquinas concludes, Christ himself must cease to be human during the three days of his death—at least if we are speaking “strictly and without qualification” (*simpliciter et absolute loquendo*).

As the addition of this last phrase is intended to indicate, there is a qualified sense in which we can speak of Christ as human during these same three days. Indeed, as Aquinas tells us in the next sentence, we can speak of him as a “dead human being” during this time. It is important, however, not to misunderstand what Aquinas is saying here (as I think commentators sometimes do).<sup>17</sup>

The term ‘dead’ (*mortuus*) is a standard example of what medieval philosophers call a *diminishing qualification* (*determinatio diminuens*)—that is, a qualification that removes something essential from the meaning of the term that it qualifies (in this case, *being animate or alive*). For the same reason, diminishing qualifications are importantly different from other sorts of qualification. As Aquinas himself notes at one point:

We can always infer an unqualified claim from a qualified claim, provided the qualification is not diminishing. For example, we can infer that *something is a human being* from the claim that *something is a white human being*. But we cannot infer that *something is a human being* from the claim that *something is a dead human being*. (QDP 9.5 obj. 2)<sup>18</sup>

This is just what we would expect, given that the standard medieval example of a dead human being is a corpse.<sup>19</sup>

In short, although there is a qualified sense in which we can speak of Christ as human during the three days of his death, it is a purely equivocal sense. Again, as Aquinas himself makes explicit:

On account of the separation of Christ’s soul from his body, which is a true corruption, Christ cannot be spoken of univocally as a human during the three days of his death, but only as a dead human being. In the same way, his eye cannot be spoken of univocally as an eye during the three days of his death, but only equivocally as a dead eye. And likewise for the other parts of Christ’s body. (*Quod*. 3.2.2.66–73)

<sup>16</sup> Aquinas spells out the precise reason for this in the text immediately preceding that just quoted:

When a general kind ceases to apply [to something], the same is true of the more specific kinds falling under it. But *living* or *animate* is a general kind under which *animal* and *human being* fall. For an animal just is a sentient, animate [corporeal] substance. During the three days of Christ’s death, however, he was not alive or animate. Hence, he was not a human being. (*ST* 3.50.4 *sed contra*)

Admittedly, this argument occurs as part of the *sed contra*—that is, the preliminary considerations that Aquinas typically uses to introduce his own views—and we cannot assume that Aquinas always agrees with the *sed contra* portions of his articles. In this particular case, however, I think it is clear that the argument represents Aquinas’s own considered position.

<sup>17</sup> See, e.g., Eberl 2009.

<sup>18</sup> Although this passage occurs as part of an objection, Aquinas clearly accepts the point in his reply. See QDP 9.5 ad 2.

<sup>19</sup> See Ebbesen 1979 for references and discussion. I will have more to say about the significance of this example for Aquinas’s views in §13.6.

Finally, consider claim (3<sub>C</sub>). As in the case of (1<sub>C</sub>) and (2<sub>C</sub>), Aquinas's commitment to accepting this claim follows from something that he takes the Incarnation to imply about Christ—though in this case it is a truth about his divinity rather than about his humanity or death:

The possessor of human nature in Christ is the person of the Son of God. Moreover, it belongs to him, by nature (*per se*), to be God. (ST 3.16.11)

According to Aquinas, “the Person of Christ exists in two natures” (ST 3.2.4). That is to say, he is by nature both human and divine. Even so, Aquinas thinks, Christ possesses each of his two natures in different ways. He possesses his human nature merely contingently—indeed, at certain times but not at others. By contrast, Christ possesses his divine nature non-contingently or necessarily, and hence at every time at which he exists. In fact, as Aquinas sees it, insofar as Christ possesses his divine nature, he is a necessary being.<sup>20</sup> This last point has an obvious bearing on what happens to Christ after death. For even if he ceases to be human at death, insofar as he is a necessary being, he cannot possibly cease to exist. On the contrary, he must rather survive, as (3<sub>C</sub>) requires.

In the end, therefore, I think it's clear that Aquinas's understanding of the Incarnation commits him to saying that there is at least one human being—namely, Christ—for whom each of claims (1)–(3) holds true. As we can now see, moreover, the apparent inconsistency to which these claims give rise isn't really due to the claims themselves, but rather to their tacit conjunction with a naïve conception of natures or essences:

#### The Naïve Conception of Natures

- (4) If  $x$  is essentially  $F$ , then  $x$  is non-contingently  $F$  (and hence such that  $x$  cannot cease to be  $F$  without ceasing to exist).

It is tempting to think that if something possesses a given nature or essence, it does so non-contingently. Aquinas's understanding of the Incarnation, however, forces him to reject this assumption. But once this assumption has been rejected, it becomes clear that there is nothing in (1)–(3) as such that prevents one from accepting all three.

## 13.4 A New Solution to the Problem

If what I have said about Aquinas's understanding of the Incarnation is correct, there is a type of solution to the problem of the afterlife that has been entirely overlooked in

<sup>20</sup> According to Aquinas, the divine nature is identical to its existence. See, e.g., ST 1.3.4. See also Brower 2008 and 2009 on the meaning of such identity claims.

the context of contemporary debates—in fact, the only type that can be said to apply in the case of Christ. As already noted, contemporary commentators implicitly assume that the only way to solve the problem in question is to reject one of the claims that give rise to it—in particular, either (2) or (3). In effect, therefore, they take for granted that Aquinas's views about the afterlife must be understood in terms of either cessationism or what we might call *human survivalism*—that is, a form of survivalism according to which human beings survive their death with their humanity intact. In the case of Christ, however, neither of these solutions can be said to apply. For although he survives his death, he does not do so as a human being. At least in the case of Christ, therefore, Aquinas's views about the afterlife must be understood as a form of *non-human survivalism*.

Obviously Christ differs from all other human beings in a number of important respects. Even so, the sort of solution required to make sense of Aquinas's views about the afterlife of Christ can be generalized to all human beings. On this sort of solution, as we shall see, an ordinary human being such as Socrates can be said to survive his death as an individual substance. Indeed, insofar as Socrates retains his soul as a proper part, he can be said to survive his death as an individual substance of a rational nature, and hence as a person. The important point, however, is that insofar as Socrates's soul ceases to be united with any matter, Socrates himself cannot be said to survive his death as a human being.

In order to see exactly how all this is supposed to work, it will be useful to begin by considering how what we've already seen of Aquinas's views about the Incarnation undermines the chief motivation for the standard solutions, even in the case of ordinary human beings.

*Against cessationism.* Cessationists often speak as if Aquinas's views about human nature and death imply that human beings must cease to exist at death. Indeed, they sometimes speak as if his views about the nature of death alone have this implication. Consider, for example, the following remarks by Patrick Toner:

If death is a substantial change, then some substance stops existing at death. In the case of a human death, what substance is there before death, to play the role of the thing that stops existing at death? There is, on St. Thomas's view, only one substance in the neighborhood: the animal—this living body here.... I believe that St. Thomas's views on death make this conclusion inescapable. (Toner 2010, 592; see also Pasnau 2002, §12.4 and van Dyke forthcoming)

In light of what we've seen of Aquinas's understanding of the Incarnation, however, it should be clear that such claims are too strong. Insofar as Aquinas accepts (1<sub>C</sub>)–(3<sub>C</sub>), he is committed to saying that there is at least one human being, Christ, who can undergo a substantial change—indeed, one that destroys a living body or animal—without thereby ceasing to exist. Reflecting on how this is possible in the special case of Christ, moreover, helps us to see that it is possible in the case of ordinary human beings as well.

When Christ dies, he does not cease to exist. Indeed, insofar as he is divine, he couldn't possibly cease to exist. Even so, Aquinas thinks, Christ must cease to be a living body or an animal at death. For, as we have seen, at death Christ's human soul ceases to be united to his matter. But a substance counts as a living body or animal, for Aquinas, only insofar as its soul is united to its matter. Thus, when Christ dies, although he does undergo a substantial change, it is not one in which he "stops existing" but rather one in which he "stops being a substance of certain type". Indeed, insofar as *living body* or *animal* is the specific type of substance that Christ "stops being", the change he undergoes at death can be properly described as a substantial change that results in the destruction of a living body or animal. In fact, to say Christ's living body is destroyed is just to say that the substance to which he is identical ceases to be an animal.

Obviously ordinary human beings are not divine for Aquinas. Hence, there is not the same pressure to say that they survive their death. Even so, there would seem to be nothing in principle to prevent ordinary human beings from undergoing the type of substantial change involved in the Incarnation—namely, one in which a substance ceases to be a living body or animal without ceasing to exist. What makes this sort of change difficult to understand is the assumption that if a substance belongs to a kind like *living body* or *animal*, it does so necessarily or non-contingently. But Aquinas's understanding of the Incarnation forces him to reject this assumption. Once the assumption has been rejected, however, the way is open for saying that even ordinary human beings can cease to belong to the kind *living body* or *animal* at death. In fact, insofar as Christ's death and resurrection provide a model of the afterlife in general, we might even expect ordinary human beings to cease to belong to this kind for the very same reason that Christ ceases to—namely, because their soul ceases to be united to their matter (even though it does not cease to be one of their proper parts or constituents). In any case, it should be clear that, contrary to what cessationists often suggest, there is nothing in Aquinas's views about human nature and death as such that requires ordinary human beings to stop existing at death. In principle, they can continue to exist along with their constituent souls.<sup>21</sup>

*Against human survivalism.* If Aquinas's cessationist commentators tend to overestimate the force of the evidence in support of their preferred solution to the problem of the afterlife, his survivalist commentators tend to underestimate the force of the evidence against theirs. Indeed, more often than not, survivalists simply seem to take for granted that if human beings survive their death, for Aquinas, they must do so *as rational animals* or *human beings*. After all, they must survive it as substances of some sort or other. But what sort could this be, if not the sort that they are by nature?<sup>22</sup>

<sup>21</sup> See again the illustration of survivalism in Fig. 13.1 and recall that the dotted arrows are best understood as representing the relation of *proper* parthood or constituency.

<sup>22</sup> Considerations of this sort have even led one survivalist to suggest that death is an accidental change for Aquinas. See Brown 2005, 124.

Although initially plausible, this line of thought comes into immediate conflict with what we have seen of Aquinas's views about death—indeed, with the very evidence that cessationists take to establish their own preferred solution. Even if cessationists are wrong to think this evidence is sufficient to rule out survivalism as such, it would seem powerful enough to rule out *human* survivalism. For, insofar as death requires the destruction of a living body, it seems obvious that nothing could possibly survive it with its animality, much less with its humanity, intact.

The standard response to this concern, on the part of survivalists, is to draw a distinction between two different sorts of conditions in which human beings can find themselves—*normal conditions*, in which they possess not only souls united to matter, but also all their limbs and various bodily parts, and *abnormal conditions*, in which they lack one or more of the things possessed in normal conditions. And the suggestion is that although the separation of the soul at death requires human beings to cease to exist in the normal conditions, it does not require them to cease to be human—any more than the loss of a limb or ordinary bodily part would. As Eleonore Stump says:

Normally, the integral [or bodily] parts of a human being include two hands, but a human being can exist without being in the ordinary condition. Analogously, the metaphysical constituents of a human being normally include matter and substantial form, but Aquinas thinks that human beings can exist without being in the normal condition in this way either. (Stump 2003, 52)

Suppose that Socrates survives his death. The crucial question, it seems to me, is not whether the conditions in which he finds himself immediately after death can be described as *normal*. Surely they cannot. Instead, the crucial question is whether Socrates can continue to be described as *human* in such abnormal conditions. And here again the answer would seem to be: surely he cannot. Without a hand, Socrates can still be described as a human being. But without a soul united to matter, he can at most be described as a dead human being. And as we have seen in the context of the Incarnation, a dead human being is no more a human being, for Aquinas, than a severed hand is a hand.<sup>23</sup>

But what about the question that motivated the distinctively human form of survivalism in the first place? If Socrates survives his death, he must survive it as a substance of some sort. But what sort is this, if not *rational animal* or *human being*? Here again a little further reflection on Aquinas's views about the Incarnation provides the answer.

<sup>23</sup> Brown (2007a, 657) has described a more radical case, which he takes to be even more like the conditions in which humans find themselves after death:

Imagine that Jane is a typical human being at time  $t$ , but (literally) loses her head in a car accident at  $t + 1$ . Through an incredible sequence of events, Jane's decapitated head is delivered alive to a hospital and hooked up to an elaborate machine that continues to keep it alive at  $t + 2$ . Imagine that *Jane* is thus alive at  $t + 2$ .

The same points, however, apply to this case. Insofar as Jane continues to possess a fully functioning head, there is a sense in which she can be said to possess a living body and hence to qualify as an animal. But the same cannot be said for a dead, or wholly disembodied, human being.

The first thing to note is that, when Christ dies, he does not cease to be a person for Aquinas. For when he dies, he does not cease to be divine. But insofar as Christ is divine, he possesses a certain type of rational nature (namely, divinity). For the same reason, he qualifies as an individual substance of a rational nature or person.

It is tempting to suppose that, when Christ dies, he survives merely as a divine person for Aquinas. For when Christ dies, and thereby ceases to belong to the species *human being*, he presumably comes to belong to just one specific substantial kind—namely, *divine being*. But that would seem to imply that immediately after death Christ can only be described as a divine person.

As it turns out, however, this is not quite right. It is true that prior to his Incarnation, Christ can only be described as a divine person for Aquinas. And it is also true that, after his death, he can no longer be described as a human being. Even so, it would be a mistake to think that, at death, Christ reverts to being merely a divine person. For, as Aquinas sees it, once Christ assumes a human soul, he never abandons it. Indeed, Aquinas seems to think it would be impossible for him to do so.<sup>24</sup> In any case, it is clear that Aquinas thinks that Christ retains his human soul between death and resurrection, and hence that although Christ's soul ceases to be united to his matter, it does not cease to be united to his person.<sup>25</sup>

All of this implies that even if Christ ceases to be human at death, he retains a natural disposition to be human. For, as we have seen, Aquinas thinks that human souls are, by nature, disposed to be united with matter.<sup>26</sup> But, then, insofar as Christ possesses such a soul after death, he must himself be naturally disposed to be composed of a soul united with matter, and hence naturally disposed to be human. And this, in turn, implies that after death, Christ is not merely a divine person, but rather a divine person with a natural disposition to be human. Indeed, if we allow ourselves to use the term 'human person' in a broad sense to cover any person who possesses such a natural disposition, we can say that even if Christ ceases to be a human being at death, he nonetheless survives as a human person.

The relevance of all this to ordinary human beings is, perhaps, obvious. For just as Christ can be said to survive his death as a human person (in my broad sense), the same would also appear to be true of ordinary human beings. Consider, for example, Socrates. Insofar as he survives his death, for Aquinas, he will presumably do so as an individual substance. Indeed, insofar as Socrates continues to serve as the proper subject of mental states and, unlike his soul, is not himself a part of any larger substance, he will presumably survive his death as a complete individual substance of a rational nature—that is, as a person. But insofar as Socrates also retains his human

<sup>24</sup> See *ST* 3.50.1–3. I shall return to the sense in which it is impossible for Christ to abandon his human soul in §13.6.

<sup>25</sup> See, e.g., *ST* 3.53.4, where Aquinas says: "Christ's divinity was not separated from his soul as a result of his death." See also *ST* 3.50.3, where Aquinas specifically addresses the question of whether Christ's soul was separated from his person at death.

<sup>26</sup> See again *SCG* 4.79.10, quoted at the beginning of the chapter.



soul as a proper part or constituent after death, he will also retain a natural disposition to be human. Evidently, therefore, Socrates can be said to survive his death as a human person (in my broad sense). And, of course, the same could be said for any other human being as well.

At this point, however, we must be careful. For there is an important respect in which ordinary human beings must be said to differ from Christ. Christ possesses his human soul merely contingently. Thus, Aquinas thinks, even if Christ cannot abandon his soul once he has assumed it, he did not have to assume it in the first place and indeed exists prior to its assumption. By contrast, ordinary human beings possess their souls non-contingently. Indeed, Aquinas thinks, they not only come into existence with their souls, but evidently cannot exist without them.<sup>27</sup> This difference is important because it suggests that, although both Christ and all other human beings qualify as human persons (in my broad sense), they do so in very different ways. Christ is first and foremost a divine person, and only a human person insofar as he happens to take on a soul that is disposed to be united with a body. By contrast, all other human beings are first and foremost human persons. In fact, there would seem to be no other type of person that they could be said to be.<sup>28</sup> In light of this difference, it might be better to say that whereas ordinary human beings are human persons (full stop), Christ is a human person only in a qualified sense—namely, a person of another sort (a divine person) that happens to be human.<sup>29</sup>

<sup>27</sup> Whether the reverse is true—that is to say, whether it is possible for Socrates's soul to come into existence without Socrates or to continue to exist in his absence—is not something I mean to be taking a stand on here.

<sup>28</sup> Here, and in what follows, I assume that things do not cease to possess their natural dispositions even in circumstances in which they manifest them. Hence, actual human beings still qualify as human persons in my broad sense.

<sup>29</sup> Commentators sometimes resist the suggestion that Christ is a human person in any sense for Aquinas. Thus, Toner (2009a, 136, n. 8) says: "Christ was never a human person." But this is much too strong a claim. For not only does Aquinas allow that Christ is a human person in the obvious sense that he is both a person and a human being (at least when his soul is united to his body), but he even insists that there is a sense in which Christ can be described as a person *insofar as he is human* (provided we understand the reduplicative phrase properly):

When the term 'human' occurs in a reduplication, it can be taken either for the subject [of human nature] or for the nature. Suppose, therefore, we say 'Christ is a person, insofar as he is human'. If 'human' is taken for the subject [of the nature], it is obvious that Christ *is* a person, insofar as he is human. For in that case the subject of human nature is nothing other than the Person of the Son of God. On the other hand, if 'human' is taken for the nature, then the claim can be understood in two ways. First, it can be understood as saying that human nature must be in a person. And in this sense, the claim is also true, since everything which subsists in human nature is a person. Second, it can be understood as asserting that the personhood proper to Christ derives from his human nature, having been caused by the principles of his human nature. And in this sense, Christ is *not* a person, insofar as he is human. For his human nature is not something existing separately from his divine nature, as this understanding of his person requires. (ST 3.16.12)

As all of this helps to make clear, there is a sense in which Aquinas is prepared to deny that Christ is a human person, but it is a very restricted one—namely, the sense in which it would require us to say that Christ's being a person *derives from* his being human.

In light of the foregoing, it should be clear that, contrary to what both cessationist and survivalist commentators standardly suggest, there is nothing to prevent us from saying that, for Aquinas, all human beings survive their death along with their souls as human persons (in my broad sense) despite ceasing thereafter to be human beings, precisely because their souls cease to be united to their matter, and hence the substances to which they are identical cease to belong to the kind *animal*. Indeed, if we return to our original formulation of the problem of the afterlife, we can see that the type of non-human survivalism that must be said to apply in the special case of Christ, for Aquinas, should also be said to apply in the case of ordinary human beings as well.

*In defense of non-human survivalism.* Recall that what gives rise to the problem of the afterlife is the fact that there is powerful evidence for thinking that Aquinas accepts each of the following claims:

#### **The Problem of the Afterlife**

- (1) Human beings are essentially human.
- (2) Human beings cease to be human at death.
- (3) Human beings do not cease to exist at death, but rather survive.

In the face of this evidence, cessationists and human survivalists both insist that Aquinas must have rejected at least one of these claims. In each case, moreover, their denial is motivated by the assumption that the claims themselves form an inconsistent triad. As we have seen, however, this assumption is mistaken. Indeed, it seems to be based on what I referred to earlier as the naïve conception of natures or essences:

#### **The Naïve Conception of Natures**

- (4) If  $x$  is essentially  $F$ , then  $x$  is non-contingently  $F$  (and hence such that  $x$  cannot cease to be  $F$  without ceasing to exist).

If Aquinas accepted this naïve conception, then claims (1)–(3) would be inconsistent. But, as we have seen, in the context of the Incarnation, Aquinas not only clearly rejects this conception, but also commits himself to specific instances of (1)–(3) in the case of Christ.

Nothing we've seen so far prevents us from generalizing Aquinas's understanding of Christ's afterlife to that of ordinary human beings. On the contrary, insofar as Christ's death and resurrection provide a model of the afterlife for all human beings, we would expect them to generalize in this way. There is, however, a question about how exactly Aquinas's rejection of the naïve conception is supposed to work in the case of ordinary human beings. Since Christ possesses two natures (one divine and one human), and since only one of them is primary (namely, divinity), there is no

reason why he can't possess the other (namely, humanity) merely contingently.<sup>30</sup> But the same can't be said in the case of ordinary human beings. They possess only a single, primary nature (namely, humanity). And in the case of primary natures, Aquinas often speaks as if they were non-contingently possessed by their bearers. Indeed, if the case of Christ's divinity were all we had to go on, we might think that Aquinas would reject (4) in favor of (4'):

**A More Nuanced Conception of Natures**

(4') If  $x$  is essentially  $F$ , and  $F$ -ness is  $x$ 's primary nature, then  $x$  is non-contingently  $F$  (and hence such that  $x$  cannot cease to be  $F$  without ceasing to exist).

If (4') represented Aquinas's views about natures, it would be impossible to say that, for him, ordinary human beings survive their death. But note that it would also be impossible to say that the souls of such human beings survive their death. For evidently it is part of the primary nature of human souls to be "the form of a body", and yet they cease to be united to the body at death. Interestingly, at one point in his discussion of the subsistence of the human soul, Aquinas considers an objection that appears to take for granted something like (4'):

That which belongs to a thing by its very nature (*secundum se*) exists in it always. But a form is such that it is united to matter by its very nature. For it is not through any accident, but through its essence that it is the actuality of matter; otherwise, what comes to be from the matter and the form would be unified accidentally and not substantially. Therefore, a form cannot exist without its proper matter. (ST 1.76.1 obj. 6)

In response, Aquinas insists that all that is required for something to be essentially  $F$ , evidently even in cases where  $F$ -ness represents a thing's primary nature, is that the thing in question possesses a certain sort of natural disposition for being  $F$ :

It belongs to the very nature of the soul (*secundum se convenit animae*) to be united to the body in the same way that it belongs to the very nature of a lightweight body to be elevated. But a lightweight body remains lightweight even when separated from its proper place. For it remains directed toward its proper place by a [natural] disposition and inclination. Likewise, the human soul remains a soul in its nature (*esse*) when it has been separated from the body, insofar as it has a natural disposition and inclination for union with the body (ST 1.76.1 ad 6).

<sup>30</sup> Insofar as Christ possesses two natures, and distinct natures are typically associated with distinct substantial forms, it might appear that Aquinas's views about the Incarnation are inconsistent with his commitment to the doctrine of the unicity of substantial forms—that is, the view that no substance possesses more than one substantial form. Strictly speaking, however, this doctrine applies only to material substances, since only they can strictly be said to possess substantial forms. As it turns out, however, even on a strict understanding of the unicity doctrine serious questions can be raised about the consistency of Aquinas's views when it comes to the nature of Christ's body during the three days of his death. See Wippel 2011, §4 for a clear statement of the problem, the difficulty of resolving it, and some of the controversies surrounding Aquinas's views on this score.

What Aquinas says here is just what we would expect, given his views about the close connection of the inherence of the soul and resurrection of the body. Indeed, if we take into account Aquinas's claim that it would be "contrary to nature" for the natural disposition of the human soul for a body to go unrealized forever (perhaps because the goodness of God could not allow it or because nature itself abhors such a thing), it would seem that we should state his conception of natures as follows:

**The Thomistic Conception of Natures**

(4'') If  $x$  is essentially  $F$ , and  $F$ -ness is  $x$ 's primary nature, then  $x$  is non-contingently disposed to be  $F$  (and hence such that  $x$  cannot permanently cease to be  $F$  without ceasing to exist).

On this statement of Aquinas's conception, there is no longer any tension with what we've seen of his views of human beings. For just as it allows for human souls to be temporarily separated from the body, despite being essentially united to them, so too it allows human beings to exist temporarily without being human, despite the fact that they are essentially human. Indeed, the statement at (4'') would appear to make sense not only of the way in which human beings are essentially human, but also of the way in which Christ is essentially divine. For insofar as Christ is divine, and divinity is part of his primary nature, he cannot fail to be disposed to be divine.

It cannot be denied that Christ's natural disposition for being divine differs, in an important respect, from what I am claiming to be the natural disposition of an ordinary human being such as Socrates for being human. For although the disposition to be human is such that Socrates can possess it even in circumstances in which he fails to be human, the same cannot be said of Christ's disposition for being divine. On the contrary, the latter disposition is such that its mere possession guarantees its manifestation.<sup>31</sup> But this sort of difference can be found in many other cases for Aquinas. All souls, whether human or non-human, possess a natural disposition to be united to the body. But, Aquinas thinks, only human souls are such that they can exist in circumstances in which they fail to manifest this disposition. Again, all accidents possess a natural disposition to inhere. But, as Aquinas makes clear in the context of the Eucharist (§11.3), only certain accidents (namely, quantities) can exist in circumstances in which they fail to manifest the disposition to inhere.

Indeed, in the context of discussing this last sort of case, Aquinas often makes it clear that as the conception of natures at (4'') is perfectly generalizable, so all natures (and kinds), whether substantial or accidental, specific or general, are to be

<sup>31</sup> Admittedly, there is something artificial about this talk of dispositions in the divine case. Still, there is at least a conceptual distinction to be drawn here between the disposition and its manifestation. In this respect, talk of dispositions in God is like talk of divine powers (see, e.g., *ST* 1.25.1); both must be understood in a purely active sense, and hence without any potentiality.

understood in primarily dispositional terms. Consider, for example, the following passage, in which Aquinas is replying to the worry that if accidents can exist without actually inhering (as the Eucharist requires) they will thereby qualify as substances (or things that exist in themselves). And note in particular his insistence that such a worry arises only if we start with the mistaken assumption that the nature of substances and accidents can be understood in non-dispositional terms:

As Avicenna says, in his *Metaphysics*, being cannot be included in the definition of any genus or species. For all things fall under the definition of some genus or species, even though there is not one genus or species of being for all things. Hence, this cannot be the true definition of substance: *a substance is something that exists in itself*. Nor can this be the true definition of accident: *an accident is something that inheres in another*. On the contrary, each of these is a loose rendering of a true description, which can be understood as follows: *a substance is something disposed, by nature, not to inhere in another* and *an accident is something disposed, by nature, to inhere in another*. For the same reason, it is clear that even if, by a miracle, an accident does not inhere in a subject, it does not satisfy the definition of substance. For it is not thereby disposed, by nature, not to inhere in another. Nor does the definition of an accident cease to apply to it, since it remains the case that it is disposed, by nature, to inhere in another. (*Quod.* 9.3 ad 2)

In this passage, Aquinas appears to be arguing that a dispositional understanding of all natures, whether substantial or accidental, is required by the Aristotelian doctrine that being is not a genus. The details of his argument are admittedly obscure, and I cannot enter into them here. Even so, as texts such as this one help to make clear, the conception of natures that Aquinas adopts in the context of the Incarnation and the afterlife for human beings is one that he takes to be justified on independent philosophical grounds.<sup>32</sup>

This completes my positive argument for non-human survivalism. As should by now be clear, we can describe non-human survivalism as the view according to which all human beings, whether divine or not, cease to be *actually* human between death and resurrection—because they cease to possess a soul united to matter—but nonetheless continue to be *essentially* human—because they continue to possess a soul that is non-contingently disposed to be united to matter, and hence a natural disposition to be actually human. Indeed, since only persons (as opposed to souls) can be human, and since any person that possesses a soul that is non-contingently disposed to be united to matter qualifies as a *human person* (in my broad sense), we can also describe non-human survivalism as the view according to which all human beings survive their death as human *persons* but not as human *beings*—and this regardless of whether the person in question is divine, and hence possesses a human soul merely contingently (as in the case of Christ), or whether the person is non-divine and hence possesses a human soul non-contingently (as in the case of all other human beings).

<sup>32</sup> See Wipfel 2000, §7.3 for further texts and discussion, including some analysis of the type of argument at issue in *Quod.* 9.3.

If my argument has been successful, it should be clear that my preferred interpretation of Aquinas provides us with a solution to the problem of the afterlife that is not only novel but attractive. For insofar as this interpretation requires that human beings survive their death along with their separated souls (as human persons in a broad sense), it preserves the chief attraction of the standard form of survivalism—namely, Aquinas's views about the proper subject for post-mortem rational activity and divine judgment. And insofar as this same interpretation requires that human beings cease to be actually human at death, it preserves the chief attraction of cessationism—namely, Aquinas's views about human nature and death. Finally, insofar as this interpretation appears to be required by Aquinas's understanding of the Incarnation, as well as his views about natures or kinds in general, it enjoys textual support independently of that which gives rise to the problem in the first place.

### 13.5 Remaining Textual Difficulties?

Despite the appeal of non-human survivalism, there are certain sorts of claims that Aquinas makes that are often thought to be inconsistent with any form of survivalism. Before concluding, I want to say something about the most important of these.

Consider first a representative example of the sorts of claims that Aquinas makes in contexts where he is discussing the importance of the resurrected body for the future life of human beings:

Strictly speaking, the soul of Abraham is not Abraham himself, but only a part of him; and likewise for all other [human beings]. For the same reason, the life of Abraham's soul does not suffice to make it the case that Abraham is living. On the contrary, that requires the life of the whole—namely, the composite of soul and body. (*In Sent.* 4.43.1.1.1 ad 2)

Passages of this sort are often taken by cessationists to provide decisive evidence against survivalism. In particular, the claim that the existence of the human soul is not sufficient for the life of a human being is often taken to suggest that human beings must cease to exist at death, and hence be survived only by their soul. Consider, for example, the following remarks by Robert Pasnau:

This [sort of claim] makes it quite clear that Aquinas is taking a frankly metaphysical stance toward death. Even though Abraham's soul will survive, and continue to live, Abraham himself will not. (Pasnau 2002, 386)

It seems to me, however, that the support such passages provide for cessationism has been greatly exaggerated. The claim that Abraham's soul is not, by itself, sufficient for the life of Abraham himself certainly requires that he ceases to be animate or alive at death. But it does not require that Abraham himself ceases to exist at death. Indeed, if we consider the broader context of Aquinas's claim in this particular passage, it would actually seem to require that Abraham survives his death along with his

separated soul. For in this particular passage, Aquinas is responding to an objection that is based on an assumption that both he and his objector accept—namely, that after death “Abraham, Isaac, and Jacob are not alive in the body, but only in the soul” (*In Sent.* 4.43.1.1.1 obj. 2). But, presumably, if Abraham is “alive” in the soul between death and resurrection, he also exists during this period.<sup>33</sup>

Admittedly, insofar as passages such as this one take for granted that human beings cease to be animate or alive at death, and hence an animal of any sort, they do count as strong evidence against the standard contemporary form of survivalism—namely, *human* survivalism. Even so, the familiar suggestion that such passages count against survivalism as such appears to be the result of a failure to recognize the possibility of *non-human* survivalism.<sup>34</sup>

There is one other context in which Aquinas makes claims that are often cited as decisive evidence against any form of survivalism—namely, that in which he is discussing the practice of calling on departed saints for prayer. Although the sorts of claims that Aquinas makes in this context ultimately seem to me to pose no more threat to survivalism than those he makes in the context of discussing the resurrection, they are not so easily explained. Indeed, I think survivalists have yet to provide a satisfactory explanation of what is going on in them.

The most commonly cited passage in this connection comes from an article of the *Summa Theologiae*, in which Aquinas is discussing whether the saints who are now in heaven can be said to pray for us. In the course of defending an affirmative answer to this question, Aquinas entertains the following objection:

The soul of Peter is not Peter. Hence, if it is the souls of the saints that pray for us, during the time when they are separated from the body, then we ought not to call on St. Peter to pray for us, but on his soul. The Church, however, does the opposite. Hence, the saints do not pray for us, at least prior to their resurrection. (*ST* 2–2.83.11 obj. 5)

What is most important for our purposes, however, is not the objection itself, but what Aquinas appears to take for granted in his response to it:

It is because the saints earned the right to pray for us while they were living that we invoke them using the names by which they were spoken of in this life and by which they are better

<sup>33</sup> I have added scare quotes around ‘alive’ to emphasize that Aquinas’s use of the term in this context is an extended or analogical one, since obviously something that is alive merely in the soul is not biologically alive. See again the discussion in §9.2 (esp. n. 10).

<sup>34</sup> It is worth noting that another such passage, often cited in this context, doesn’t even count against human survivalism:

Since the soul is a part of the human body, it is not the whole human being, and my soul is not me. So even if the soul were to achieve salvation in another life, it wouldn’t be me or any other human being that achieved it. (*In I Cor.* 15.2.924)

This passage, already touched on in §12.3, emphasizes two points: (1) that human beings are distinct from their souls, and (2) that resurrection of the body is necessary if human beings are to achieve salvation (since given the distinction of human beings from their souls, the salvation of the latter is not sufficient for the salvation of the former). But these are both points that even the human survivalist can accept.

known to us. And we also invoke them in this way to express our faith in the resurrection, in line with what is said in Exodus 3: "I am the God of Abraham," etc. (*ST* 2–2.83.11 ad 5)

Note that Aquinas appears to be taking for granted here his objector's assumption that it is not Peter who is now in heaven, but only his soul. For the same reason, it is often said that Aquinas himself must be assuming that human beings cease to exist at death. Patrick Toner puts the point in a particularly forceful way:

Think about the Response. It does not say—as it seems it would if the alternative view were correct—that St. Peter is indeed in heaven now and can thus pray for us now. Why *wouldn't* St. Thomas have said that, if he accepted the alternative view? One couldn't hope for a more straightforward or compelling rebuttal to the objection. Rather, Aquinas accepts the premise of the objection—that St. Peter is not currently in heaven—and explains why, despite that being the case, the Church asks St. Peter to pray for us. This is completely inexplicable from the standpoint of the alternative view. (Toner 2009a, 125)

The question Toner raises here is a fair one. If some form of survivalism is true, why doesn't Aquinas respond to the objection by insisting that it is Peter (not just his soul) who is currently in heaven? There is, I think, a straightforward answer, apparently heretofore overlooked: because *this* was never in doubt.<sup>35</sup> In order to see that this is the correct answer, as well as what *was* in doubt, we must first appreciate what is motivating both the original objection and Aquinas's response—namely, a standard medieval view about the function of proper names.

Following Priscian, it was customary for medievals to say that all names (*nomina*) signify "substance with quality"—that is, a substance *of a certain sort or established in a certain nature*.<sup>36</sup> And this view, in turn, was standardly taken to imply that proper names have a certain sort of descriptive content (or sense) built into them. Thus, a name like 'Peter' automatically conveys that its bearer is human, and hence a certain type of organism or living body. Indeed, as Aquinas himself insists in the context of discussing the Incarnation, the meaning of a term like 'Peter' is equivalent to the general term 'human being' plus a demonstrative referring to whatever it is that distinguishes him from other human beings:

The term 'human being' signifies something possessing a human nature (*habentem humanitatem*). But the possession of human nature is signified in one way by the term 'human being' and in another way by the name 'Peter' or 'Jesus'. For the former conveys the possession of human nature in a general way . . . whereas the name 'Peter' or 'Jesus' conveys it in a distinctive way—namely, together with determinate distinguishing properties. (*ST* 3.17.1)

So far so good. But now consider that, if this theory of proper names is correct, there is a real question about how proper names of human beings manage to refer to anything after the death of their bearers. Consider first the case of Christ. For reasons

<sup>35</sup> For a brief survey of other possible answers, see Brown 2013.

<sup>36</sup> See Ashworth 2012 and the references cited therein for historical background and details.



we've already seen, there can be no doubt that he survives his death. Even so, the standard medieval view about proper names would seem to imply he can no longer be referred to by his earthly name of 'Jesus'. For, insofar as he ceases to be animate or alive, and hence human, he ceases to be a candidate referent for a term like '*this human being*'. Similar remarks apply, of course, to the case of Peter.

If we return to the original objection and response with all of this in mind, I think it's clear that both take on a new significance. The objection begins by noting that the Church encourages us to ask the saints to intercede on our behalf, and then infers that such requests must be for *post-resurrection* assistance, since it is only after their resurrection that they will be embodied or alive again, and hence capable of being referred to by their earthly names. In response, Aquinas does not challenge the standard medieval theory of proper names, but rather accepts it, insisting instead that we are entitled to use such earthly names for the saints, even after death, at least in an extended sense, insofar as this expresses "our faith in the resurrection". Indeed, the overall point of his response appears to be the following. Prior to death, the proper name of a saint, such as 'Peter', refers to a particular substance that is human (*this human being*, where 'this' designates the substance in question). But after death, the same name can be used in an extended sense to refer to the same substance insofar as it is naturally disposed to be human (*this thing that was human and will be human again*, where 'this' designates the same substance as before). And this, of course, is just what we might expect if non-human survivalism were correct.

In the end, therefore, it seems to me that even those passages that are often singled out as providing the strongest evidence against survivalism pose no real threat to the sort of interpretation I have been defending. Indeed, if what I have just said is correct, they might even be taken to provide additional, indirect support for it.<sup>37</sup>

### 13.6 Change, Hylomorphism, and Material Objects Revisited

There is much more that could be said about Aquinas's views of human nature, personhood, death, and the afterlife, and much more that would need to be said if we were going to provide anything like an exhaustive treatment of them. In closing, however, I merely want to note a few of the most important complications they introduce for the proper understanding of Aquinas's ontology. As will become clear, these complications raise far more questions and difficulties than I can address, much less resolve. Even so, my brief examination of them will, I hope, serve to emphasize some of the intriguing dialectical possibilities that remain latent within Aquinas's

<sup>37</sup> As all of this helps to make clear, it is a mistake to suppose, as commentators sometimes do, that Aquinas's views about the afterlife can be decided solely on the basis of particular passages, taken in isolation or apart from broader, systematic considerations of the sort I have been examining. See again n. 7, this chapter.

views about the chief topics of this book—change, hylomorphism, and material objects—as well as identify some directions for future research.

Let us begin with some of the complications introduced by Aquinas's views about human death in general and Christ's death in particular. The first thing to note here is that Aquinas's views on this score appear to require a type of substantial change heretofore overlooked. When a human being dies, whether it be Christ or an ordinary human being such as Socrates, a substantial change occurs. Even so, the change itself does not require that any previously existing substance ceases to exist. On the contrary, it merely requires that such a substance ceases to belong to a specific substantial kind—namely, *human being*. Again, when a human being is resurrected, whether it be Christ or Socrates, a similar sort of change occurs, only in reverse. Indeed, just as human death requires no previously existing substance to cease to exist, so too resurrection requires no new substance to come into existence. On the contrary, it merely requires that a previously existing substance comes to belong again to the substantial kind, *human being*. In order to contrast this sort of change with the sorts considered in Chapter 11 (§11.2)—namely, transformation, transmutation, and transubstantiation—we might refer to the former as *transpeciation*, since it always requires a previously existing substance to change with respect to some specific natural kind or species.

As in the case of other sorts of change, Aquinas habitually speaks of cases of transpeciation as involving the generation or corruption of substances. Thus, he speaks of human death as the corruption of the human body and of resurrection as the regeneration of the same body. What is more, when Christ becomes incarnate, by taking on a human nature, he speaks of this as the generation of a human being.<sup>38</sup> Given what we have just said about the nature of transpeciation, however, it might be better to speak of such cases as involving the generation or corruption of different *types* of substance, rather than the generation or corruption of substances themselves.

It is also important to note that when a substance undergoes transpeciation with respect to one specific substantial kind, Aquinas does not think it thereby ceases to belong to all other such kinds. Thus, when Christ becomes incarnate, a new type of substance is generated in virtue of his coming to belong to the kind *human being*. Even so, Christ does not cease to belong to the kind *divine being*. Indeed, as Aquinas's understanding of the Incarnation makes clear, insofar as a single substance can possess more than one specific nature, it can belong to more than one specific substantial kind.

It is tempting to assume that, insofar as an ordinary human being, such as Socrates, possesses a single specific nature, for Aquinas, it can only belong to a single specific substantial kind. But as it turns out, even that is not quite right. For, as we have seen, Socrates is, by nature, human, and yet he can exist without belonging to the species

<sup>38</sup> See, e.g., *ST* 3.35.1.

*human being*. Even when Socrates is not human, however, he will still be a substance of some specific type and hence presumably belong to a specific substantial kind—say, *human person* (or *something naturally disposed to be human*). But if that is right, then when Socrates is actually human, he will belong to two specific substantial kinds—namely, *human being* and *human person*.

What all of this shows, I think, is that when it comes to natures (and kinds), for Aquinas, we must draw a distinction between a dispositional and a non-dispositional understanding of them. And this is true, both in the case of primary natures (and the kinds to which things belong in virtue of possessing them) and in the case of non-primary natures (and their associated kinds). Thus, in virtue of possessing a human nature in the dispositional sense, both Socrates and Christ belong to the kind *human person* (though in different ways), whereas in virtue of possessing a human nature in the non-dispositional (or actualized) sense, they both belong to the kind *human being*—where ‘*human person*’ and ‘*human being*’ pick out human nature in the dispositional and non-dispositional senses, respectively. In the case of Socrates, however, his human nature is primary. Indeed, as we can now see, it is really the dispositional understanding of this nature that is primary. For if we want to know what Socrates is—that is, the primary or fundamental kind to which he belongs—the best answer would seem to be *human person* (or something naturally disposed to be human). By contrast, such a nature cannot be said to be primary in the case of Christ, even in its dispositional understanding. For if we want to know what Christ is—that is, the primary or fundamental kind to which he belongs—the best answer would seem to be *divine person*. This is why I said earlier that Christ is best understood as a divine person who happens to be human rather than a human person (full stop). And even in his case, it might be best to characterize his primary nature in dispositional terms—that is, as *something naturally disposed to be divine*—since even in his case the two understandings of his primary nature can be distinguished conceptually.<sup>39</sup>

So far I have been focusing on the way in which Aquinas’s views about the afterlife complicate his understanding of change and natural kinds. But these same views also introduce some important complications for his hylomorphism and views about material objects. In order to see how, we must first take account of something that we have until now been ignoring—namely, a respect in which Aquinas thinks that Christ’s death differs from that of all other human beings.

When an ordinary human being such as Socrates dies, Aquinas thinks that he not only ceases to be animate or alive, but also ceases to be a body or material substance of any type. This is because when Socrates’s soul separates from his body, Socrates himself ceases to be composed of any matter. (See again the illustration of survivalism at Fig. 13.1.) In the case of Christ, by contrast, Aquinas insists that although he ceases to be animate or alive when he dies, he does not cease to be composed of matter. On

<sup>39</sup> Though see again the qualifications in n. 31, this chapter.

the contrary, he retains his matter, and hence remains a body of some sort—even if only a dead body or corpse.<sup>40</sup>

In order to understand the reason for this difference, it must be recalled that the doctrine of the Incarnation requires us to say not only that Christ suffered and died, but also that he was *buried*. As Aquinas sees it, this requirement entails that Christ retained his body after death, since only bodies can be buried:

The Word of God [i.e., Christ] was not separated from his body at death . . . since what is true of his body after its separation from the soul—namely, that it was buried—is also predicated of the Son of God [i.e., Christ himself]. (ST 3.50.3; see also a. 2)

In short, Aquinas thinks, when an ordinary human being such as Socrates dies, he retains his soul, but not his matter. By contrast, when Christ dies, he retains not only his soul, but also his matter, and hence his body.

In Chapter 12 (esp. §12.3, §12.5), I described human beings as occupying a special place in Aquinas's ontology. For, insofar as they are composed of matter, they are unlike wholly immaterial substances (or spirits). And insofar as they are composed of a subsistent, immaterial soul, they are also unlike wholly material substances (or bodies). Indeed, it was precisely because of their differences from substances of both types that I suggested they should be identified, for Aquinas, with the members of a third realm—namely, partly material substances. As we can now see, however, this isn't quite right. Although all human beings are partly material substances, the converse is not true. For insofar as Christ continues to possess both matter and a subsistent, immaterial soul, after death, he still counts as a partly material substance, even though he is no longer human.

The distinction between partly material substances and human beings is an important one, Aquinas thinks, because failure to recognize it can tempt one to think that Christ must be human after death. Indeed, Aquinas accuses Peter Lombard of falling into just this temptation:

In book 3, distinction 22 of the *Sentences*, the Master [Peter Lombard] asserts that Christ was human during the three days of his death . . . because he did not think that the union of soul and body was required for being human. On the contrary, he thought it was sufficient for something to be human that it possess a human soul and body, whether they are united or not. But that is clearly false. (ST 3.50.4)

Aquinas's understanding of Christ's death may well provide the only example of a non-human partly material substance (and a fleeting one at that). Even so, it does indicate his commitment to a type of hylomorphic compound heretofore unrecognized—namely, one whose form is not united to its matter.

<sup>40</sup> This, I think, is what ultimately explains Aquinas's willingness to refer to Christ as a *dead human being* during the three days of his death. For, as I noted earlier, the standard medieval example of a dead human being is a corpse.

Earlier I noted a respect in which Christ's relationship to his human soul and body is much weaker, for Aquinas, than the corresponding relationship in the case of other human beings. For Christ can exist, and actually does exist prior to incarnation, without such a soul or body. Even so, what Aquinas says about the distinctive nature of Christ's death helps to bring out a respect in which his relationship to his soul and body is much stronger than that in the case of ordinary human beings. For unlike all other human beings, Aquinas thinks that once Christ takes on both, he cannot cease to be united with either. As he says in the case of Christ's body:

What is bestowed by God's grace is never removed without some cause for blame (*culpa*) . . . But there was no sin in Christ. It was impossible, therefore, that the union of divinity with his flesh [or body] should be dissolved. (ST 3.50.2)

The argument Aquinas gives here is somewhat difficult to understand. Presumably the union that exists between Christ's human soul and body (or matter) is something that was bestowed by God's grace. And yet he clearly allows that it can be removed without any cause for blame.<sup>41</sup> In any case, the point of the passage is clear enough: once Christ assumes some matter, he cannot cease to be united to it (and hence to be a body of some sort). And, of course, Aquinas thinks the same point applies to Christ's soul.<sup>42</sup> By contrast, he thinks, all other human beings can cease to be united with their matter, and hence to be a body of any sort.

As all of this helps us to see, Aquinas thinks of Christ as having a distinctive status among the inhabitants of the realm of partly material substances. Although he can exist as a wholly immaterial substance, once he becomes partly material he cannot cease to be so—even when he ceases to be human. By contrast, all other human beings cannot come into existence except as partly material substances, though they can come to be wholly immaterial—and do so temporarily at death. In short, unlike Christ, who permanently enters the realm of the partly material when he becomes human, all other human beings temporarily leave this realm for that of the wholly immaterial when they die.<sup>43</sup>

From the perspective of what we've seen in previous chapters regarding Aquinas's hylomorphism and his views about material objects, all of this is, of course, quite

<sup>41</sup> Although perhaps the idea here is that, because such a union exists naturally (given the nature of souls), it was not strictly necessary for it to be bestowed by grace.

<sup>42</sup> Indeed, Aquinas thinks that the case here is even stronger:

The soul is united to the Word of God even more immediately and primarily than the body, since the body is united to the Word of God through the soul . . . But, then, if the Word of God could not be separated from the body at death, much less could it be separated from the soul. (ST 3.50.3)

<sup>43</sup> Eleonore Stump (2003, 17) has colorfully described human souls, for Aquinas, as *metaphysical amphibians*, because of their ability to move between the realm of (partly) material and (wholly) immaterial beings. As we can now see, her description would seem to apply equally well to human beings—although in light of the differences just noted, Christ and ordinary human beings must be regarded as metaphysical amphibians of very different sorts.

surprising. When Aquinas describes human beings as substances that are, by nature, composed of both matter and a human soul, it is tempting to think that this must mean that they cannot fail to be material objects, and hence hylomorphic compounds of some type. As we can now see, however, this is not the case. Although all human beings are, by nature, partly material substances, all of them are merely contingently composed of matter, and one of them (namely, Christ) is merely contingently composed of both matter and form. Indeed, in the special case of Christ, we get not only a substance that is merely contingently composed of both matter and form (and hence merely contingently both a material object and a hylomorphic compound), but also a substance that is merely contingently complex. For as Aquinas sees it, it is only when Christ becomes incarnate that he comes to be a “composite”—that is, a being existing in two natures, and hence possessing matter and form.<sup>44</sup>

Insofar as ordinary human beings are only contingently composed of matter, it might be thought that they, too, are only contingently complex. Indeed, it is sometimes suggested in the literature that if Socrates survives his death without any matter, he must go from being complex to being simple.<sup>45</sup> But this seems to rest on a confusion. Prior to death, Socrates is distinct from both his matter and his soul. Indeed, these are both among his proper parts (where it will be recalled that  $x$  is a proper part of  $y$  only if  $x \neq y$ ). But presumably if Socrates is distinct from his soul at any time, he must be distinct from it at every time (on the principle that “once distinct, always distinct”). It would be better, therefore, to say that, at death, an ordinary human being such as Socrates comes to be temporarily composed of a single proper part—namely, his soul. This is, of course, another surprising result, insofar as it conflicts with one of the axioms of standard contemporary mereology.<sup>46</sup> But it is not, for that very reason, absurd. For this axiom has been challenged by contemporary philosophers on independent grounds.<sup>47</sup> And, in any case, it must be kept in mind that the type of parthood or composition that Aquinas takes to hold between a human being and its soul, what I have been calling *hylomorphic composition*, already fails some of the axioms of standard mereology (§8.1).

The possibility of a substance existing with a single proper part raises some further questions for the proper understanding of Aquinas's ontology. Insofar as Socrates comes to be composed only of his soul, he clearly ceases to be a material object. But does he also cease, for that very reason, to be a hylomorphic compound? We have seen that Aquinas thinks there can be forms without matter (or substrata), in the case of both the human soul after death and certain accidents in the case of the Eucharist (§§11.3–4). Indeed, in the case of the Eucharist, we have seen that Aquinas is committed to the existence of a type of hylomorphic compound whose proper

<sup>44</sup> See, e.g., *ST* 3.2.4. <sup>45</sup> See, e.g., Toner 2009b.

<sup>46</sup> According to this axiom, usually called *Weak Supplementation*, if something  $x$  is a proper part of  $y$ , then  $y$  must also have a proper part  $z$ , where  $x \neq z$ .

<sup>47</sup> See, e.g., Donnelly 2011, Fine 1999, and Smith 2009.

parts include only accidental forms—namely, qualities and quantities. In the latter case, however, we still have something playing the functional role of matter, since in the Eucharist Aquinas thinks that the qualities of the bread and wine come to inhere in its quantities. In the case of Socrates, however, there is nothing to play the role of his matter after death, since the soul that he comes to be composed of is separated from matter, and hence no longer inheres in anything. Indeed, this is the point of Aquinas's describing the human soul as *subsistent* (§§11.4–5).

It might be thought that all of this goes to show that Socrates no longer counts as a hylomorphic compound after death. On the other hand, Socrates clearly continues to be a composite or compound of some type after death, insofar as he remains composed of a proper part. What is more, the proper part of which he is composed is clearly a hylomorphic part, and hence the relation that he bears to it presumably remains a type of hylomorphic composition. Wouldn't it be better, therefore, to say that what all of this really shows is the possibility of yet another type of hylomorphic compound that we have heretofore failed to recognize? In the end, it may be that this is more a terminological issue than anything else.

There is, of course, much more that could be said about all of these complications. But I hope that what I have already said, both in this chapter and in the previous two, is sufficient to reinforce the interest and value of Aquinas's ontology of the material world. At the same time, I hope that it is also clear from these chapters that, when it comes to understanding Aquinas's complete views about change, hylomorphism, and material objects, much work still remains to be done.

# Appendix: A Glossary of Technical Terms

As noted in Chapter 1 (§1.1), Aquinas's tendency to use technical Aristotelian vocabulary in a multiplicity of senses greatly complicates the exposition of his views.<sup>1</sup> For ease of reference, and to facilitate my discussion of Aquinas's views in this book, I provide here a catalog of the most important terms for which we have had to distinguish more than one sense. Wherever possible, I list the various senses associated with a given term in order of increasing generality—that is, from *strictest* (or *most proper*) to *broadest* (or *most extended*). It must be kept in mind, however, that even when such senses are related as specific to general, or as distinct specifications of a more general sense, they are not always univocal for Aquinas, but sometimes merely analogical.<sup>2</sup>

BEING IN ACTUALITY, *ens in actu*

- (1) In a strict sense, this term applies only to beings that possess forms or actualities as proper parts. In this sense, only compounds qualify as beings in actuality.
- (2) In a broader sense, this term applies to any beings that can be said to possess forms or actualities in themselves—where such beings include not only compounds, but also forms and simple substances. In this sense, being in actuality contrasts with the sort of being possessed by prime matter—namely, being in pure potentiality.
- (3) In the broadest sense, this term applies to anything that can be said to possess forms or actualities in any way whatsoever. In this sense, even a portion of prime matter qualifies as a being in actuality, since it possesses form or actuality via inheritance.

COMPOUND, *compositum*: see also MATTER and FORM

- (1) In a strict sense, this term applies only to matter–form complexes—that is, to a type of fact (or concrete state of affairs) distinct from its constituent matter (or substrata) and forms (or properties). In this sense, both material substances (such as Socrates) and accidental unities (such as white-Socrates) qualify as compounds.
- (2) In a broader sense, this term applies to anything that exists when some matter possesses a form, leaving open the question of whether this being is distinct from or literally composed of its matter and form.

ESSENCE, *essentia*: see NATURE

FORM, *forma*: see also MATTER and COMPOUND

- (1) In a strict sense, this term applies only to properties. In this sense, all accidents and all substantial forms other than the souls of human beings qualify as forms.
- (2) In a broader sense, this term applies to anything that is related to a substratum via inheritance. In this sense, even the human soul (which is not a property) qualifies as a form.

<sup>1</sup> See §1.1, n. 10 for some explanation of this tendency.

<sup>2</sup> See Chs 1–2, 10 (esp. §2.4 and §10.1) for some discussion of Aquinas's views on analogy.



- (3) In the broadest sense, this term applies to anything that has actuality in itself (see BEING IN ACTUALITY<sub>2</sub>). In this sense, even God and immaterial substances qualify as forms.

GENERATION (AND CORRUPTION), *generatio (et corruptio)*

- (1) In a strict sense, this term applies to the coming to be of a substance from a portion of pre-existing prime matter (or the passing away of a substance into such a portion of matter). Only material substances can be generated (or corrupted) in this sense.
- (2) In a broader sense, this term applies to the coming to be of any sort of hylomorphic compound from any pre-existing matter (or the passing away of any sort of compound into such matter). In this sense, both material substances and accidental unities can be generated (or corrupted).
- (3) In the broadest sense, this term applies to any beings that come into (or pass out of) existence when compounds are generated (or corrupted) in either of the first two senses. In this sense, even substantial and accidental forms can be generated (or corrupted).

INDIVIDUAL, *individualis*

- (1) In a strict sense, this term applies to all beings except prime matter—that is, to all beings that both (a) have actuality in themselves, and (b) qualify as distinct members of some natural kind or species. Unless otherwise indicated, this is the sense of ‘individual’ that I use throughout the book.
- (2) In a broader sense, this term applies to anything that has actuality and either qualifies as a distinct member of some type of being or plays a role in individuation. In this sense, even portions of prime matter qualify as individual.

MATTER, *materia*: see also FORM and COMPOUND

- (1) In a strict sense, this term applies only to prime matter. (See PRIME MATTER.)
- (2) In a broader sense, this term applies to anything that serves as the substratum for some form or property. In this sense, both prime matter and certain substances (see SUBSTANCE<sub>1</sub>) qualify as matter—indeed as different types of matter.

NATURE, *natura*<sup>3</sup>

- (1) In a strict sense, this term applies only to that in virtue of which something belongs to some species or genus within the Aristotelian category of *Substance*. In this sense, only created substances have a nature.
- (2) In a broader sense, this term applies to that in virtue of which something belongs to any of the ten Aristotelian categories. In this sense, both created substances and accidents have a nature.
- (3) In the broadest sense, the term applies to that in virtue of which something belongs to any distinctive type of being. In this sense, every being has a nature, including both God and prime matter.

<sup>3</sup> In Aquinas’s texts, the term ‘nature’ (*natura*) is more or less equivalent to ‘essence’ (*essentia*) and ‘quiddity’ (*quidditas*). See in particular the discussion in DEE 1.20–52.

PARTICULAR, *particularis*

- (1) In Aquinas's texts, the Latin term '*particularis*' is more or less equivalent to 'individual'. (See INDIVIDUAL.)
- (2) In my exposition of Aquinas's texts, I have stipulated that we use the English term 'particular' in a narrower sense to refer to individuals of a certain type—namely, subsistent individuals (or individuals that do not inhere). Moreover, I distinguish two main types of particular:
  - (a) *Basic particulars*: particulars not composed of other particulars;
  - (b) *Non-basic particulars*: particulars composed of at least one other particular.<sup>4</sup>

PRIME MATTER, *materia prima*

- (1) In a strict sense, this term applies only to that which lacks being or actuality through itself, and hence only to non-individual being (also known as pure potentiality). (See BEING IN ACTUALITY<sub>2</sub> and INDIVIDUAL<sub>1</sub>.)
- (2) In a broader sense, this term applies to anything that serves as the substratum for a substantial form or property, leaving open the precise nature of the being that plays this role. In this sense, even something with being or actuality through itself could, in principle, qualify as prime matter. (See again BEING IN ACTUALITY<sub>2</sub> and INDIVIDUAL<sub>1</sub>.)

PURE POTENTIALITY, *potentia pura*: see BEING IN ACTUALITY and PRIME MATTER

QUIDDITY, *quidditas*: see NATURE

SUBSTANCE, *substantia*

- (1) In a strict sense, this term applies only to basic particulars that belong to the Aristotelian category of *substance* or serve as the substrata for accidents. (See PARTICULAR<sub>2</sub>.) In this sense, only created substances qualify as substances.<sup>5</sup>
- (2) In a broader sense, this term applies to all basic particulars, whether or not they serve as substrata for accidents. (See again PARTICULAR<sub>2</sub>.) In this sense, both created substances and God qualify as substances.
- (3) In the broadest sense, this term applies to anything subsistent—that is, to anything that does not merely inhere (or exist in the way that forms or properties do). In this sense, even a portion of prime matter can qualify as a substance.<sup>6</sup>

<sup>4</sup> See §12.5 for a complication concerning this understanding of the distinction.

<sup>5</sup> Aquinas's discussion of the human soul introduces a further complication here, forcing a distinction between complete and incomplete substances. See the discussion in §§11.4–5 and §12.5.

<sup>6</sup> This sense of 'substance' is somewhat unusual, but important for understanding Aquinas's claim that human beings are composed of body and soul. See again the discussion in §11.4.

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